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Author:

U.S. Bureau of Foreign  
and Domestic Commerce

Title:

The hosiery industry

Place:

Washington, D.C.

Date:

1915

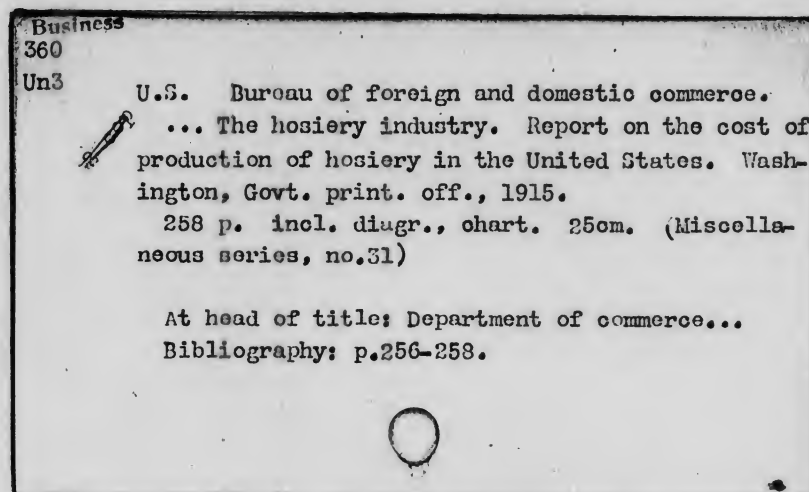
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BUREAU OF FOREIGN AND DOMESTIC COMMERCE

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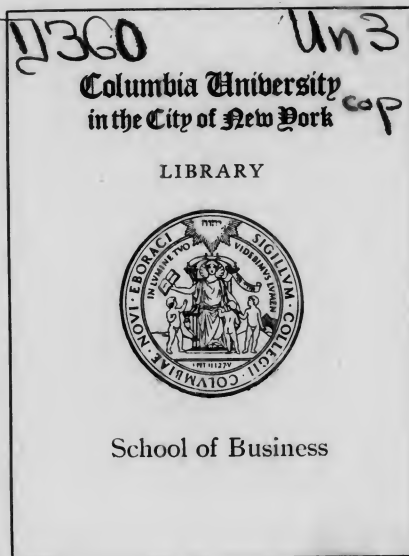
MISCELLANEOUS SERIES—No. 31

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THE HOSIERY INDUSTRY

REPORT ON THE COST OF PRODUCTION OF  
HOSIERY IN THE UNITED STATES



WASHINGTON  
GOVERNMENT PRINTING OFFICE  
1915



DEPARTMENT OF COMMERCE

BUREAU OF FOREIGN AND DOMESTIC COMMERCE

E. E. PRATT, Chief

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# THE HOSIERY INDUSTRY

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HOSIERY IN THE UNITED STATES



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## LETTER OF SUBMITTAL.

DEPARTMENT OF COMMERCE,  
BUREAU OF FOREIGN AND DOMESTIC COMMERCE,  
*Washington, August 20, 1915.*

SIR: I beg to submit herewith a report on the cost of production of hosiery, which is the second of a series of reports to be issued by the Bureau of Foreign and Domestic Commerce regarding the cost of production in different branches of the clothing industry.

This investigation was undertaken in accordance with the act of Congress approved August 23, 1912. In addition to the cost of production, the report contains information concerning imports and exports, working conditions, factory equipment, selling methods, and other trade conditions of interest in connection with the hosiery industry, and some practical suggestions with regard to efficient factory management based on interviews with manufacturers and on the personal observations of the special agents.

According to the Census of Manufactures, the value of the hosiery produced in the United States in the calendar year 1909 was \$68,721,825, of which the value of cotton hosiery was \$55,909,987. The importations of cotton hosiery in the fiscal year ending June 30, 1909, were valued at \$6,390,923, or 11.43 per cent of the production in the calendar year 1909. Such importations during the fiscal year 1914 amounted to \$2,949,678, or 5.28 per cent of the domestic production in 1909. This percentage would undoubtedly be much lower if the imports in 1914 were compared with the domestic production in that year.

During the nine months from October 1, 1912, to June 30, 1913, the average rate of duty on the imports of cotton hosiery, computed on the ad valorem basis, was 69.35 per cent. During the period from October 4, 1913, when the new tariff went into effect, to June 30, 1914, a month before the war in Europe began, the average ad valorem rate on such importations was 44.6 per cent. Nearly all of the importations of hosiery are of the cheaper grades of full-fashioned cotton hosiery. The production of such hosiery in the United States is small as compared with the production of seamless hosiery. The labor cost of making full-fashioned hosiery is larger than the labor cost of

making seamless hosiery. No tariff act has ever made a distinction between the rates of duty on full-fashioned hosiery and those on seamless hosiery.

The statistics of exports do not classify the exports of hosiery separately from those of other knit goods, but the exports of all classes of cotton knit goods increased from \$1,016,325 in the fiscal year 1909 to \$2,546,822 in the fiscal year 1914, or over 150 per cent.

In the investigation of the cost of production of hosiery, reports were secured from 73 establishments located in 16 States. Some of these establishments were large and some small, but all were fairly representative of the industry. Their sales during their last business period, usually a year, amounted to \$27,010,893. Manufacturers usually were found to be willing to furnish the information desired in this investigation, but 24 of those visited, of whom 15 were in Philadelphia, refused.

The concrete results of the investigation appear in the summary of this report while the detailed information is given in the various chapters.

The general conduct of the field work of the investigation has been under the direction of Walter B. Palmer, a special agent of the Bureau of Foreign and Domestic Commerce. In the field work and in the preparation of the report he was assisted by Special Agents David M. Barclay, Joseph Broido, Edward S. Fawcett, Harry Gell, J. Knight Rector, Thomas A. Williams, and Stanley D. Winderman. The general direction of the office work and the editing of the report has been in charge of Gustavus A. Weber, expert in charge of the cost of production division, assisted by Henry J. Bierman.

E. E. PRATT,  
*Chief of Bureau.*

To HON. WILLIAM C. REDFIELD,  
*Secretary of Commerce.*

## COST OF PRODUCTION IN THE HOSIERY INDUSTRY.

### INTRODUCTION.

#### THE HOSIERY AND KNIT GOODS INDUSTRIES.<sup>a</sup>

In the value of products the hosiery and knit goods industries (considered as one industry) ranked thirtieth among the industries of the United States in 1899 and twenty-seventh in 1904 and 1909.<sup>b</sup> The industry is widely distributed; in 1909 there were one or more establishments making hosiery or knit goods in 38 of the 48 States. Of the total production in the United States during 1909, amounting to \$200,143,527, the per cent produced in each of the 10 States with the largest production was as follows: New York, 33.5; Pennsylvania, 24.8; Massachusetts, 7.4; Wisconsin, 3.9; Ohio, 3.2; Illinois, 3; Connecticut, 2.9; North Carolina, 2.6; New Hampshire, 2.4; Michigan, 2.<sup>c</sup>

The principal centers for the manufacture of cotton hosiery in the United States are Philadelphia and Reading, Pa. Woolen hosiery is largely made in New England. A large proportion of the cotton knit underwear manufactured in the United States is made in Utica, Amsterdam, and other places in the Mohawk Valley in New York State. Cohoes, N. Y., is an important center for the manufacture of woolen knit underwear. New York City is the principal center for the manufacture of bathing suits. Little Falls, N. Y., is a center for both sweaters and cotton knit underwear. In the last few years there has been a great increase in the manufacture of both hosiery and knit underwear made of cotton in the Southern Atlantic and Middle Western States. Table 1 gives data regarding the production in various cities:

TABLE 1.—MANUFACTURING CENTERS OF THE HOSIERY AND KNIT GOODS INDUSTRIES, 1904 AND 1909.

[Thirteenth Census, Manufactures, Vol. VIII, p. 125.]

Cities.	Value of products.		Per cent of United States total.	
	1909	1904	1909	1904
Philadelphia, Pa.	\$23,901,699	\$15,770,873	12.0	11.5
New York, N. Y.	12,386,254	6,030,721	6.2	4.4
Amsterdam, N. Y.	8,158,701	4,877,022	4.1	3.4
Utica, N. Y.	8,053,844	5,261,166	4.1	3.9
Cohoes, N. Y.	5,087,315	4,126,873	2.6	3.0
Little Falls, N. Y.	4,464,852	2,547,676	2.3	1.9
Reading, Pa.	4,551,087	2,540,105	2.3	1.9

<sup>a</sup> In this introductory chapter describing the industry in the United States as a whole it was not possible to consider the hosiery industry separately from that of the knit goods industry because in the Census reports from which the figures were mainly obtained these two industries are grouped together. The other chapters of the report relate to the hosiery industry only.

<sup>b</sup> Thirteenth Census, Manufactures, Vol. VIII, p. 45.

<sup>c</sup> Ibid., Vol. X, p. 68.



In the reports of the Bureau of the Census statistics are given of the production of each of the following classes of goods: Hosiery; shirts and drawers; combination suits; sweaters; cardigan jackets, etc.; gloves and mittens; hoods; scarfs; nubias, etc.; shawls; boot and shoe linings; yarns for sale; and all other products. Except as regards production, however, the statistics in the reports of the Bureau of the Census are not separately given for these different classes of goods.

The information which follows regarding the manufacture of hosiery and knit goods was compiled from a section of the report of the Census of Manufactures in 1909.<sup>a</sup>

Statistics of the hosiery and knit goods industries were first obtained by the census of 1849, when 85 establishments were reported, with products valued at \$1,028,102. In 1859, 197 establishments were reported, with products valued at \$7,280,606. Table 2 summarizes the statistics of these industries for each census for 40 years, from 1869 to 1909, inclusive. The financial figures for 1869 are given in currency, which at that time was worth only about 80 cents gold to the dollar. For strict comparison, therefore, these figures should be reduced about 20 per cent.

There were, in 1909, 1,374 establishments in the hosiery and knit goods industries, in which 136,130 persons were engaged, of whom 129,275 were wage earners. The amount paid in salaries and wages was \$52,431,680. The value of products was \$200,143,527; the cost of materials, \$110,241,053, equal to 55.1 per cent of the value of products; and the value added by manufacture was \$89,902,474. Between 1899 and 1909 the number of wage earners increased 54.5 per cent, while the cost of materials, value of products, and value added by manufacture more than doubled. Part of the increase shown in cost of materials and value of products, however, may doubtless be attributed to increased prices.

The growth of the industry has been continuous throughout the period covered by Tables 2 and 3, each census showing a substantial increase as compared with that preceding. The number of establishments reported for 1909 was more than five times as great as in 1869, and the value of products nearly eleven times as great. The greatest relative growth took place during the decade 1879-1889, each item for which comparable figures can be presented showing a greater percentage of increase for this decade than for any other covered by the table.

<sup>a</sup> Thirteenth Census, Manufactures, Vol. X, pp. 65-89; also separately issued as a bulletin.



FIG. 1.—Value of the products of the hosiery and knit-goods industries in the more important States, 1899 and 1909.

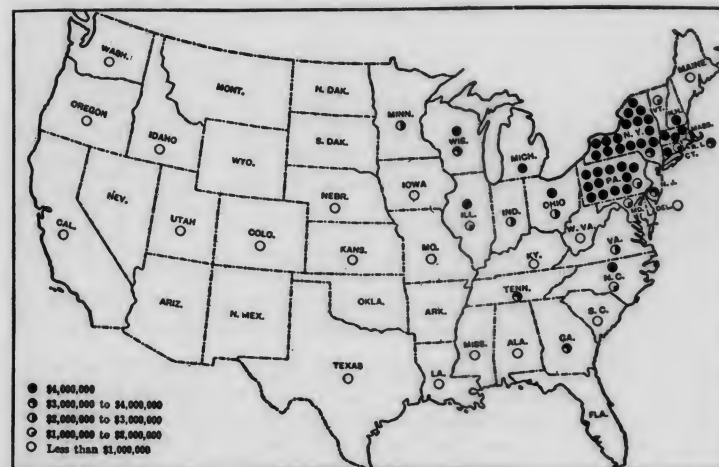


FIG. 2.—Distribution of the value of products of the hosiery and knit-goods industries, by States, 1909.

TABLE 2.—GENERAL STATISTICS OF THE HOSIERY AND KNIT-GOODS INDUSTRIES, CENSUS YEARS 1869-1909.

[Thirteenth Census, Manufactures, Vol. X, p. 67.]

Items.	1909	1904	1899	1889	1879	1869
Number of establishments...	1,374	1,144	1,006	824	398	248
Persons engaged in the industry.....	136,130	109,489	(a)	(a)	(a)	(a)
Proprietors and firm members.....	1,134	1,067	(a)	(a)	(a)	(a)
Salaried employees.....	5,721	4,330	2,831	(a)	(a)	(a)
Wage earners (average number).....	129,275	104,092	83,691	b 59,774	b 30,699	b 14,788
Primary horsepower.....	103,709	78,769	57,346	34,564	11,561	6,498
Capital.....	\$163,641,171	\$106,943,072	\$82,065,517	\$50,686,206	\$15,732,291	\$10,931,260
Expenses.....	175,729,583	123,276,675	85,305,367	57,922,723	(a)	(a)
Services.....	62,431,680	36,069,758	27,172,657	18,325,261	6,839,195	4,429,085
Salaries.....	7,691,457	4,455,151	3,138,160	(a)	(a)	(a)
Wages.....	41,740,223	31,614,607	21,434,497	(a)	(a)	(a)
Materials.....	110,241,053	76,789,348	51,195,330	35,949,865	15,449,991	9,835,823
Miscellaneous.....	13,056,850	10,417,569	6,627,380	3,647,597	(a)	(a)
Value of products.....	200,143,527	137,076,454	95,833,692	67,446,788	29,613,581	18,411,564
Value added by manufacture (value of products less cost of materials).....	89,902,474	60,287,106	44,638,362	31,496,923	14,163,500	8,575,741

a Comparable figures not available.

b Figures not strictly comparable with those for later years.

TABLE 3.—GROWTH OF THE HOSIERY AND KNIT-GOODS INDUSTRIES IN THE CENSUS YEARS 1869 TO 1909, EXPRESSED IN PERCENTAGES.

[Thirteenth Census, Manufactures, Vol. X, p. 67.]

Items.	Per cent of increase. <sup>a</sup>					
	1899-1909	1904-1909	1899-1904	1889-1899	1879-1889	1869-1879
Number of establishments.....	36.6	21.1	13.7	22.1	107.0	60.5
Persons engaged in the industry.....	24.3	6.3	.....	.....	.....	.....
Proprietors and firm members.....	102.1	31.7	52.9	.....	.....	.....
Salaried employees.....	54.5	24.2	24.4	.....	.....	.....
Wage earners (average number).....	80.8	81.7	37.4	65.9	199.0	77.9
Primary horsepower.....	99.4	33.0	30.3	61.9	224.2	43.9
Expenses.....	105.8	42.5	44.4	47.4	167.9	54.4
Services.....	90.2	45.4	30.8	50.5	.....	.....
Salaries.....	145.1	72.6	42.0	.....	.....	.....
Wages.....	83.1	41.5	29.4	42.4	132.7	57.1
Materials.....	115.3	49.6	50.0	31.7	127.8	60.8
Miscellaneous.....	97.0	25.3	57.2	42.1	.....	.....
Value of products.....	108.8	46.0	43.0	.....	.....	.....
Value added by manufacture (value of products less cost of materials).....	101.4	49.1	35.1	41.7	122.4	65.2

a Where percentages are omitted, comparable figures are not available.

Table 4 summarizes, by States, the more important statistics of the industries, the States being arranged according to the value of products reported for 1909.

Of the 10 leading States in 1909 on the basis of value of products, North Carolina showed the largest percentage of increase from 1899 to 1909 (403.6). Still higher percentages of increase, however, are shown for Tennessee and Minnesota. Vermont and South Carolina are the only States which show a decrease in value of products between 1904 and 1909.

The diagram (fig. 1, p. 11) shows graphically the value of products reported for the most important States in the industries in 1909 and 1899, and the map (fig. 2, p. 11) shows the distribution of the value of products, by States, for 1909.

## INTRODUCTION.

TABLE 4.—GENERAL STATISTICS OF THE HOSIERY AND KNIT-GOODS INDUSTRIES, BY STATES, ARRANGED ACCORDING TO THE VALUE OF PRODUCTS REPORTED IN 1909, CENSUS YEARS 1904-1909.

[Thirteenth Census, Manufactures, Vol. X, p. 68.]

States.	Num-ber of estab-lish-ments, 1909.	Wage earners.			Value of products.			Value added by manufacture.			Per cent of increase. <sup>a</sup>							
		Aver-age num-ber, 1909.	Rank.		Per cent of total, 1909.	Amount, 1909.	Rank.		Per cent of total, 1909.	Amount, 1909.	Rank.		Value of products.			Value added by manufacture.		
			1909	1904			1909	1904			1899-1909	1904-1909	1899-1904	1904-1909	1899-1909	1904-1909	1899-1904	1904-1909
New York.....	360	35,950	27.8	2	\$67,130,296	33.5	1	\$28,452,925	31.6	1	35.0	22.4	10.3	86.3	44.9	80.5	57.1	14.9
Pennsylvania.....	464	38,206	29.6	1	49,657,596	24.8	2	22,743,193	23.0	2	47.9	21.6	26.3	41.2	40.5	84.1	51.9	34.4
Massachusetts.....	65	9,941	7.7	3	14,736,025	7.9	2	5,924,193	8.6	2	55.8	22.4	34.4	46.0	52.0	108.5	53.0	36.3
Wisconsin.....	39	3,149	2.3	7	6,433,431	3.2	5	2,582,012	2.9	7	121.8	26.5	75.0	60.9	152.2	199.2	47.6	102.8
Illinois.....	43	3,340	2.6	10	5,946,737	3.0	6	2,714,372	3.1	6	59.0	24.4	27.8	108.7	96.4	69.2	41.9	134.8
Connecticut.....	21	5,151	4.0	6	5,800,692	2.9	7	2,752,145	3.1	6	23.6	7.1	10.8	43.7	42.8	125.3	70.3	70.3
North Carolina.....	62	5,129	4.0	7	5,151,692	2.6	8	2,139,397	2.4	8	25.6	12.2	12.0	88.7	19.9	53.3	96.5	109.8
New Hampshire.....	21	3,129	2.4	8	4,764,119	2.0	9	1,429,335	2.4	9	11	24.1	75.0	69.9	23.6	67.0	21.9	37.0
Michigan.....	35	2,545	2.0	12	3,029,790	1.9	10	1,466,531	2.2	11	11.2	31.7	23.0	44.4	11.2	29.8	48.8	11.3
Rhode Island.....	27	2,566	1.9	13	3,810,241	1.9	11	1,984,393	2.2	10	17	51.0	42.5	55.5	22.8	49.1	32.4	12.6
Tennessee.....	22	2,743	2.4	9	3,565,436	1.8	13	1,445,211	1.6	13	14	127.1	72.2	254.2	902.5	157.9	71.0	51.4
Georgia.....	22	2,743	2.4	9	3,262,623	1.6	14	1,390,187	1.5	15	15	41.8	60.2	162.6	39.9	89.0	187.5	351.4
Virginia.....	11	1,715	1.3	16	2,402,787	1.2	14	1,466,531	1.1	17	15	41.8	60.2	162.6	39.9	89.0	187.5	351.4
Indiana.....	5	1,933	1.5	14	2,381,219	1.2	15	1,466,531	1.1	17	15	41.8	60.2	162.6	39.9	89.0	187.5	351.4
Minnesota.....	10	1,052	1.1	17	2,242,694	1.2	16	1,466,531	1.1	17	15	41.8	60.2	162.6	39.9	89.0	187.5	351.4
Vermont.....	11	1,022	1.1	18	1,729,229	1.0	18	1,659,922	1.3	16	18	299.0	71.1	109.9	47.1	85.4	108.4	46.6
South Carolina.....	7	839	0.6	19	1,172,325	0.6	19	475,170	0.5	19	18	9.1	3.3	12.0	4.9	8.2	8.8	100.5
Alabama.....	6	611	0.5	20	655,340	0.3	20	321,470	0.4	21	19	49.9	16.7	28.1	42.8	23.1	85.2	132.1
California.....	208	2,252	2.2	22	501,000	0.3	22	277,345	0.3	22	22	22.0	21.0	194.7	30.3	175.3	108.4	34.9
Delaware.....	4	492	0.4	23	431,970	0.2	23	252,338	0.3	22	22	22.0	21.0	194.7	30.3	175.3	108.4	34.9
Utah.....	11	174	0.1	24	448,987	0.2	24	196,857	0.2	23	21	15.5	62.3	44.5	4.7	29.5	33.5	35.5
Iowa.....	5	445	0.4	25	329,229	0.2	25	166,855	0.2	24	21	15.5	62.3	44.5	4.7	29.5	33.5	35.5
Missouri.....	17	1,181	0.9	26	78,586	0.1	26	46,041	0.1	25	30	.....	.....	.....	.....	.....	.....	.....
All other States.....	17	1,181	0.9	26	1,201,136	0.6	26	657,940	0.7	26	30	.....	.....	.....	.....	.....	.....	.....
United States.....	1,374	129,275	100.0	.....	200,143,527	100.0	.....	89,902,474	100.0	.....	54.5	24.2	21.4	108.8	46.0	43.0	101.4	35.1

a A minus sign (-) denotes decrease. Percentage not shown where base is less than 100 for wage earners or less than \$100,000 for value of products or value added by manu-  
 facture, where comparison cannot be given without disclosing individual operations.  
 b Less than one-tenth of 1 per cent.

Table 5 shows in some detail the products of the hosiery and knit-goods industries in the United States during the census years 1909, 1904, and 1899:

TABLE 5.—QUANTITY AND VALUE OF HOSIERY AND KNIT GOODS PRODUCED IN 1899, 1904, AND 1909, AND PER CENT OF INCREASE FROM 1899 TO 1909.

[Thirteenth Census, Manufactures, Vol. X, p. 79.]

Products.	1909	1904	1899	Increase, <sup>a</sup> 1899-1909
<b>Hosiery:</b>				<i>Per cent.</i>
Dozen pairs.....	62,825,069	44,186,063	29,903,899	110.1
Value.....	\$68,721,825	\$44,113,260	\$27,420,029	150.6
Cotton, merino, and woolen—				
Hose—				
Dozen pairs.....	34,409,562	25,999,813	16,641,769	107.3
Value.....	\$37,909,011	\$26,152,043	\$16,203,872	133.9
Cotton—				
Dozen pairs.....	32,409,104	24,169,804	15,028,173	116.3
Value.....	\$34,078,622	\$22,764,799	\$13,275,732	156.7
Merino or mixed—				
Dozen pairs.....	834,029	746,226	436,891	90.9
Value.....	\$1,406,283	\$1,182,164	\$659,959	122.2
Woolen or worsted—				
Dozen pairs.....	1,166,429	1,083,783	1,176,705	— .9
Value.....	\$2,358,106	\$2,205,080	\$2,267,681	4.0
Half-hose—				
Dozen pairs.....	27,891,093	18,144,185	13,249,558	110.5
Value.....	\$27,218,398	\$17,438,914	\$11,030,244	146.8
Cotton—				
Dozen pairs.....	24,805,917	15,223,243	11,352,081	118.5
Value.....	\$21,831,365	\$11,821,530	\$7,906,945	176.1
Merino or mixed—				
Dozen pairs.....	2,023,641	1,611,066	957,520	111.3
Value.....	\$3,209,912	\$2,214,678	\$1,384,764	138.3
Woolen or worsted—				
Dozen pairs.....	1,061,535	1,309,876	939,957	12.9
Value.....	\$2,087,121	\$3,402,406	\$1,735,535	20.1
Silk—				
Dozen pairs.....	434,414	42,065	12,572	3,355.4
Value.....	\$3,600,416	\$522,303	\$186,413	1,831.4
Shirts and drawers:				
Dozens.....	25,837,779	19,723,141	15,873,700	59.6
Value.....	\$69,592,817	\$56,643,860	\$45,675,894	52.4
All cotton—				
Dozens.....	22,567,121	17,107,958	12,053,431	87.1
Value.....	\$50,007,598	\$39,658,762	\$26,882,902	86.0
Merino or mixed—				
Dozens.....	2,586,473	2,113,810	2,675,416	— 5.2
Value.....	\$17,065,624	\$13,031,754	\$13,293,829	28.3
All wool—				
Dozens.....	178,163	485,328	1,085,046	— 63.6
Value.....	\$1,830,521	\$3,647,934	\$4,980,818	— 63.4
Silk and silk mixed—				
Dozens.....	56,022	16,045	54,807	2.2
Value.....	\$709,074	\$305,410	\$518,045	36.9
Combination suits:				
Dozens.....	2,473,103	1,440,420	986,855	150.6
Value.....	\$14,853,536	\$6,793,947	\$3,691,847	302.3
All cotton—				
Dozens.....	2,047,637	1,260,301	824,632	148.3
Value.....	\$9,713,597	\$4,478,664	\$2,240,566	333.5
Merino or mixed—				
Dozens.....	364,387	105,242	139,994	160.3
Value.....	\$4,217,432	\$1,139,949	\$1,133,328	272.1
All wool—				
Dozens.....	50,102	68,067	9,501	427.3
Value.....	\$683,289	\$965,132	\$201,667	238.8
Silk or silk mixed—				
Dozens.....	10,977	6,810	12,728	— 13.8
Value.....	\$239,218	\$150,202	\$116,286	105.7
Sweaters, cardigan jackets, etc.:				
Dozens.....	2,221,410	811,629	594,090	272.9
Value.....	\$22,430,817	\$8,345,369	\$3,498,837	541.1
Gloves and mittens:				
Dozen pairs.....	2,527,889	2,260,508	1,898,587	33.1
Value.....	\$7,296,887	\$5,556,260	\$4,244,046	71.9
Hoods, scarfs, rubias, etc.:				
Dozens.....	888,223	589,315	243,429	168.6
Value.....	\$3,217,985	\$1,774,862	\$1,002,392	221.0

<sup>a</sup> A minus sign (—) denotes decrease.

TABLE 5.—QUANTITY AND VALUE OF HOSIERY AND KNIT GOODS PRODUCED IN 1899, 1904, AND 1909, AND PER CENT OF INCREASE FROM 1899 TO 1909—Continued.

Products.	1909	1904	1899	Increase, 1899-1909
<b>Shawls:</b>				<i>Per cent.</i>
Dozens.....	218,923	435,306	157,622	38.9
Value.....	\$916,294	\$1,293,348	\$328,720	178.7
Boot and shoe linings:				
Square yards.....	9,726,770	11,768,961	10,406,440	— 6.5
Value.....	\$1,209,464	\$1,249,401	\$2,205,003	— 45.1
Yarns for sale.....	\$1,785,531	\$1,000,083	\$498,790	258.0
Cotton—				
Pounds.....	7,457,412	3,304,615	2,419,282	208.2
Value.....	\$1,568,417	\$654,234	\$422,100	271.6
Woolen, worsted, and merino—				
Pounds.....	488,322	491,559	134,529	263.0
Value.....	\$217,114	\$345,849	\$76,890	183.1
All other products.....	<sup>a</sup> \$10,118,371	\$10,306,064	\$7,268,434	39.2
Total value.....	<sup>b</sup> \$200,143,527	<sup>c</sup> \$137,076,454	\$95,833,692	108.8

<sup>a</sup> Includes products to the value of \$1,028,907, the character of which pertains to the following industries: Boxes, fancy and paper; clothing, men's, including shirts; clothing, women's; dyeing and finishing textiles; fancy articles, not elsewhere specified; gloves and mittens, leather; hats and caps, other than felt, straw, and wool; instruments, professional and scientific; photographic apparatus and materials; waste; and woolen, worsted, and felt goods, and wool hats.

<sup>b</sup> In addition, hosiery and knit goods to the value of \$2,975,749 were made in 1909 by establishments in the following industries: Boots and shoes, rubber; clothing, men's, including shirts; clothing, women's; cotton goods, including cotton small wares; gloves and mittens, leather; hats and caps, other than felt, straw, and wool; millinery and lace goods; silk and silk goods, including throwsters; woolen, worsted, and felt goods, and wool hats. In 1904 products to the value of \$1,579,633 were made by establishments not engaged primarily in the manufacture of hosiery and knit goods.

Of the total value of products of the industry in 1909, that of hosiery constituted 34.3 per cent; that of shirts, drawers, and combination suits, 42.2 per cent; that of sweaters, cardigan jackets, etc., 11.2 per cent; that of gloves and mittens, 3.6 per cent; and that of all other products, 8.6 per cent. In the case of each of the classes of hosiery, as well as of shirts and drawers and combination suits, the cotton product predominated as to both quantity and value.

Of the total value of the hosiery manufactured in 1909, \$68,721,825, cotton hosiery amounted to \$55,909,987, or 81.35 per cent; merino or mixed hosiery to \$4,766,195, or 6.94 per cent; woolen or worsted hosiery to \$4,445,227, or 6.47 per cent; and silk hosiery to \$3,600,416, or 5.24 per cent.

Of the total value of the cotton hosiery manufactured in 1909, \$55,909,987, hose amounted to \$34,078,622, or 60.95 per cent, and half hose to \$21,831,365, or 39.5 per cent.

Of the total value of the merino or mixed hosiery manufactured in 1909, \$4,766,195, hose amounted to \$1,466,283, or 30.76 per cent, and half hose to \$3,299,912, or 69.24 per cent.

Of the total value of the woolen or worsted hosiery produced in 1909, \$4,445,227, hose amounted to \$2,358,106, or 53.5 per cent, and half hose to \$2,087,121, or 46.95 per cent.

During the 10 years from 1899 to 1909 the production of hosiery increased in value 150.6 per cent; cotton hose, 156.7 per cent; cotton half hose, 176.1 per cent; merino or mixed hose, 122.2 per cent; merino or mixed half hose, 138.3 per cent; woolen or worsted hose, 4 per cent; woolen or worsted half hose, 20.1 per cent; silk hose and half hose, 1,831.4 per cent.

Table 6 shows the different products of the hosiery industry in 1909, 1904, and 1899, by States:

TABLE 6.—QUANTITY OF HOSIERY PRODUCED, BY STATES, DURING 1899, 1904, AND 1909, AND VALUE OF THE PRODUCT IN 1909.

[Thirteenth Census, Manufactures, Vol. X, p. 81.]

Products and States.	Value, 1909.	Quantity.		
		1909	1904	1899
<b>HOSIERY</b>	<b>\$68,721,825</b>	<b>Dozen pairs. 62,825,069</b>	<b>Dozen pairs. 44,186,063</b>	<b>Dozen pairs. 29,903,899</b>
Connecticut.....	1,109,617	580,100	672,242	393,111
Georgia.....	2,389,012	3,726,330	1,880,495	1,195,362
Massachusetts.....	4,780,351	4,506,960	2,790,860	2,363,872
Michigan.....	1,419,432	605,589	356,459	445,612
New Hampshire.....	3,164,689	2,681,273	2,300,948	1,592,267
New Jersey.....	1,603,231	850,932	1,101,536	794,926
New York.....	639,185	355,687	233,697	160,272
Ohio.....	664,128	400,275	411,817	233,716
Pennsylvania.....	30,847,344	27,832,601	20,327,710	15,232,324
Virginia.....	522,282	715,807	561,484	360,300
Wisconsin.....	3,806,117	2,373,261	1,673,731	657,866
All other States.....	17,776,537	18,216,254	11,875,084	6,474,271
<b>Cotton</b>	<b>55,909,987</b>	<b>57,305,021</b>	<b>39,393,047</b>	<b>26,380,254</b>
Connecticut.....	302,049	97,616	29,599	95,818
Georgia.....	2,389,012	3,726,330	1,880,495	1,194,772
Illinois.....	2,914,121	3,069,634	1,861,140	1,662,150
Massachusetts.....	3,734,618	4,280,266	2,556,261	2,255,341
New Hampshire.....	984,243	1,186,912	1,043,153	559,439
New Jersey.....	736,731	752,452	1,090,511	757,836
New York.....	284,720	280,383	194,564	78,248
North Carolina.....	4,100,089	5,806,140	2,928,032	1,069,431
Pennsylvania.....	28,697,548	27,139,582	19,707,227	14,858,506
Virginia.....	522,282	715,807	561,484	355,800
Wisconsin.....	2,935,926	2,042,952	1,449,096	347,614
All other States.....	8,339,048	8,206,947	6,091,555	3,145,299
<b>Hose</b>	<b>34,078,622</b>	<b>32,499,104</b>	<b>24,169,804</b>	<b>15,028,173</b>
Georgia.....	1,018,086	1,226,235	602,388	400,427
Illinois.....	1,729,376	1,188,667	504,304	469,000
Massachusetts.....	2,801,323	3,506,546	2,118,093	2,031,921
New Jersey.....	626,199	656,239	949,802	694,195
North Carolina.....	2,877,922	3,879,392	1,950,578	726,094
Pennsylvania.....	16,058,169	13,876,893	11,769,534	7,863,561
Wisconsin.....	1,774,409	1,143,366	1,337,595	256,586
All other States.....	7,193,138	7,021,766	4,937,450	2,586,389
<b>Half hose</b>	<b>21,831,365</b>	<b>24,805,917</b>	<b>15,223,243</b>	<b>11,352,081</b>
Georgia.....	1,370,926	2,500,095	1,278,107	794,345
Illinois.....	1,184,745	1,880,967	1,356,886	1,193,150
Massachusetts.....	933,295	773,720	438,168	228,420
North Carolina.....	1,222,767	1,926,748	977,454	343,337
Pennsylvania.....	12,639,379	13,262,689	7,937,693	6,994,945
Wisconsin.....	1,161,617	899,586	111,501	91,028
All other States.....	3,318,736	3,562,112	3,123,484	1,711,856
<b>Woolen or worsted</b>	<b>4,445,227</b>	<b>2,227,964</b>	<b>2,393,659</b>	<b>2,116,662</b>
Connecticut.....	420,639	232,629	164,679	171,211
New Hampshire.....	1,589,567	991,105	600,706	784,891
Pennsylvania.....	805,725	429,918	502,226	207,200
Wisconsin.....	350,835	128,894	187,876	124,265
All other States.....	1,278,461	446,418	938,172	829,095
<b>Merino or mixed</b>	<b>4,766,195</b>	<b>2,857,670</b>	<b>2,357,292</b>	<b>1,394,411</b>
New Hampshire.....	590,779	503,256	657,080	247,937
Ohio.....	504,939	323,948	239,162	105,000
Pennsylvania.....	153,666	118,604	97,222	160,618
All other States.....	3,516,811	1,911,862	1,363,819	880,856
<b>Silk</b>	<b>3,600,416</b>	<b>434,414</b>	<b>42,065</b>	<b>12,572</b>
Pennsylvania.....	1,190,405	145,497	21,035	6,000
All other States.....	2,410,011	288,917	21,030	6,572

Of the total value of hosiery manufactured in the United States in 1909, \$68,721,825, Pennsylvania produced 44.89 per cent; Massachusetts, 6.96 per cent; Wisconsin, 5.54 per cent; New Hampshire, 4.60 per cent; Georgia, 3.48 per cent. New York, the leading State in the knit-underwear industry, produced only 0.93 per cent of the total production of hosiery.

In the quantity of production of all kinds of hosiery the greatest percentage of increase during the decade 1899-1900 was made by Wisconsin, 260.8 per cent, followed by Georgia, 211.7 per cent.

Of the total value of the cotton hosiery manufactured in the United States in 1909, \$55,909,987, Pennsylvania produced 51.33 per cent; North Carolina, 7.33 per cent, Massachusetts, 6.68 per cent; Wisconsin, 5.25 per cent; Illinois, 5.21 per cent; Georgia, 4.27 per cent.

In the quantity of production of cotton hosiery the greatest percentage of increase during the decade 1899-1900 was made by Wisconsin, 487.7 per cent, followed by North Carolina, 442.9 per cent.

In the manufacture of woolen and worsted hosiery New Hampshire is the leading State. In 1909 it produced 35.76 per cent of the total production, \$4,445,227.

In the manufacture of merino or mixed hosiery also New Hampshire is the leading State. In 1909 it produced 12.40 per cent of the total production, \$4,766,195.

In the manufacture of silk hosiery Pennsylvania is the leading State. In 1909 it produced 33.06 per cent of the total production, \$3,600,416.

Tables 7 and 8 show, by geographic divisions, for the censuses of 1909, 1904, and 1899, the output of hosiery, of shirts and drawers, of combination suits, of cardigan jackets, sweaters, etc., and of gloves and mittens, and the value of all other products in the hosiery and knitgoods industries.

The Middle Atlantic division is the leading division in the manufacture of hosiery and knit goods, as measured by total value of products, and also ranks first in the production of each class of products shown separately in the table. The New England division ranked second in the total value of products in 1909, the East North Central third, and the South Atlantic fourth. The South Atlantic division, however, ranked second in 1909 in the quantity of hosiery output and third in that of shirts and drawers, showing increases of 221.5 per cent and 53.2 per cent, respectively, for the decade. In 1899 the New England division outranked the South Atlantic in the quantity of hosiery production, but by 1904 it had dropped to third place in this respect. The industry is comparatively unimportant in the West North Central, the two South Central, and the Mountain and Pacific divisions, but high percentages of increase for the decade are shown for all these divisions.

The principal statistics secured by the census inquiry concerning the hosiery and knitting mills are presented, by States, in Tables 9 and 10.



TABLE 7.—TOTAL VALUE OF PRODUCTS, VALUE AND QUANTITIES OF PRINCIPAL PRODUCTS, AND VALUE OF ALL OTHER PRODUCTS, OF HOSIERY AND KNIT GOODS, BY GEOGRAPHICAL DIVISIONS, IN 1899, 1904, AND 1909.

[Thirteenth Census, Manufactures, Vol. X, p. 83]

Divisions and years.	Number of establishments.	Total value.	Principal products.					Value of all other products.
			Value.	Quantity.				
				Hosiery (dozen pairs).	Shirts and drawers (dozens).	Combination suits (dozens).	Sweaters, cardigan jackets, etc. (dozens).	
United States:								
1909	1,374	\$200,143,527	\$182,895,882	62,825,069	25,337,779	2,473,103	2,221,410	2,527,889
1904	1,144	137,076,454	121,432,066	44,186,063	19,727,141	1,440,420	1,631,629	2,260,508
1899	1,006	95,833,692	84,330,353	29,903,899	15,875,700	1,986,855	594,090	1,898,357
New England:								
1909	137	30,990,884	27,884,676	8,409,837	2,758,239	447,005	46,051	56,542
1904	136	24,807,979	20,068,978	6,222,109	2,336,507	170,992	17,446	81,159
1899	145	17,866,327	14,550,546	4,689,422	2,110,157	77,093	8,642	78,990
Middle Atlantic:								
1909	861	120,598,043	111,280,584	29,039,220	19,374,641	1,436,323	1,948,808	1,480,071
1904	876	73,681,629	62,669,422	21,062,943	14,575,705	987,682	707,619	903,376
1899	610	59,738,128	55,046,869	16,187,522	12,284,987	769,234	537,791	649,883
East North Central:								
1909	183	26,633,881	22,641,245	7,782,722	1,091,844	329,004	261,925	691,078
1904	159	18,435,357	15,075,180	5,331,966	821,134	115,684	70,635	1,275,973
1899	133	11,513,341	8,473,429	3,699,107	433,621	40,657	44,536	1,169,051
West North Central:								
1909	18	2,697,647	2,413,496	302,880	108,735	100,066	14,037	200
1904	10	1,262,586	1,080,233	128,219	150,954	13,232	7,814	495
1899	8	410,062	383,845	95,969	9,430	13,232	1,616	495
South Atlantic:								
1909	119	13,770,901	13,423,965	13,070,504	1,855,542	134,858	90	189,151
1904	100	9,243,665	9,028,126	7,739,948	1,558,064	155,159	50	122,333
1899	72	5,087,402	5,015,069	4,063,969	1,034,640	98,967	50	26,247
East and West South Central:								
1909	33	4,581,498	4,405,383	4,213,253	408,439	4,000	900	346,936
1904	24	2,088,069	2,044,949	2,004,003	273,471	3,750	1,445	215,539
1899	4	395,150	395,150	543,500				72,313
Mountain and Pacific:								
1909	23	980,673	841,533	6,633	14,389	21,847	10,499	119,140
1904	14	563,224	509,224	7,285	6,679	7,047	7,876	127,167
1899	11	203,437	97,687	8,370	840	1,642	1,445	105,750
Production in States which can not be distributed by geographic divisions without disclosing individual operations:								
1909	25	933,594	891,564	889,480	627	106	189	42,214
1904	23	618,815	567,738	614,010	25	10	60	51,077
1899	23	618,815	567,738	614,010	25	10	60	51,077

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TABLE 8.—DISTRIBUTION, BY GEOGRAPHICAL DIVISIONS, OF PRINCIPAL PRODUCTS OF HOSIERY AND KNIT GOODS, EXPRESSED IN PERCENTAGES.

[Thirteenth Census, Manufactures, Vol. X, p. 83.]

Divisions and years.	Number of establishments.	Total value.	Principal products.					Value of all other products.	
			Value.	Quantity.					
				Hosiery (dozen pairs).	Shirts and drawers (dozens).	Combination suits (dozens).	Sweaters, cardigan jackets, etc. (dozens).		Gloves and mittens (dozen pairs).
New England:									
1909	10.0	15.5	15.2	13.4	10.9	18.1	2.1	2.2	18.0
1904	11.9	16.5	14.1	14.1	11.8	11.9	2.1	3.6	30.3
1899	14.4	18.6	17.2	15.7	13.3	7.8	1.5	4.2	29.3
Middle Atlantic:									
1909	62.7	60.3	60.8	46.2	76.5	58.1	87.7	58.5	54.0
1904	59.1	58.1	59.8	49.0	73.9	68.6	87.2	40.0	44.9
1899	60.6	62.3	65.1	54.1	77.4	77.0	90.5	34.2	41.5
East North Central:									
1909	13.3	13.3	12.4	12.4	4.3	13.3	9.1	39.2	23.1
1904	13.9	13.4	12.4	12.1	4.2	8.0	8.7	68.4	23.5
1899	13.2	12.0	10.0	12.4	2.7	4.1	7.5	61.6	26.9
West North Central:									
1909	1.3	1.3	1.3	.5	.4	4.0	.6	(a)	1.1
1904	.9	.9	.9	.3	.8	1.3	1.0	(a)	.8
1899	.8	.5	.5	.3	.1	1.3	.3	(a)	.2
South Atlantic:									
1909	8.7	6.9	7.3	20.8	6.3	5.5	(a)	(a)	2.0
1904	8.7	6.7	7.4	17.5	7.9	10.8	(a)	(a)	1.4
1899	7.2	5.3	5.9	13.6	6.5	9.5	(a)	(a)	.6
East and West South Central:									
1909	2.4	2.3	2.4	6.7	1.6	.2	(a)	(a)	1.0
1904	2.1	1.5	1.7	5.0	1.4	.3	(a)	(a)	.8
1899	.5	.4	.5	1.8	.1	.2	(a)	(a)	.0
Mountain and Pacific:									
1909	1.7	.5	.5	(a)	.1	.9	.5	(a)	.7
1904	1.2	.5	.5	(a)	(a)	.5	1.0	(a)	.8
1899	1.1	.2	.1	(a)	(a)	.2	.2	(a)	.0
Production in states which can not be distributed by geographic divisions without disclosing individual operations:									
1909	2.2	.7	.7	2.0	(a)	(a)	(a)	(a)	.3
1904	2.3	.7	.7	2.1	(a)	(a)	(a)	(a)	.5
1899	2.3	.7	.7	2.1	(a)	(a)	(a)	(a)	.5

(a) Less than one-tenth of 1 per cent.

TABLE 9.—DETAILED STATISTICS OF EXPENSES OF HOSIERY AND KNT-GOODS ESTABLISHMENTS, BY STATES, 1909.

[Thirteenth Census, Manufactures, Vol. X, p. 89.]

States.	Capital.	Total.	Services.		Materials.		Miscellaneous.			Value of products.	Value added by manufacture (value of product less cost of material).
			Officials.	Clerks.	Wage earners.	Fuel and rent of power.	Other.	Rent of factory.	Taxes, including internal revenue.	Contract work.	
Alabama.....	\$627,282	\$508,184	223,180	\$6,020	\$121,086	\$10,633	\$303,002	\$922	\$1,918	\$39,793	\$591,000
California.....	515,170	496,259	320,720	122,708	1,322,208	67,643	2,987,948	5,574	44,370	451,970	252,338
Connecticut.....	6,283,942	5,227,458	10,813	1,821	1,322,212	67,643	2,987,948	13,372	44,370	451,970	252,338
Delaware.....	2,269,652	2,975,327	73,578	73,578	718,631	61,757	1,810,679	.....	15,428	213,442	1,860,187
Georgia.....	5,115,952	4,938,859	103,179	115,841	1,116,476	56,391	3,175,974	881	9,743	277,088	2,714,372
Illinois.....	2,405,786	1,906,913	73,562	104,409	688,755	20,429	894,204	.....	14,957	116,900	1,466,586
Indiana.....	420,276	304,848	18,120	6,426	78,500	6,394	149,241	.....	38,128	4,119	278,586
Iowa.....	128,953	1,051,357	2,500	1,000	253,810	15,256	89,899	.....	8,919	4,119	278,586
Massachusetts.....	12,477,893	12,287,791	306,387	206,677	3,854,828	174,846	6,196,686	1,560	2,667	40,574	475,170
Maryland.....	3,734,803	3,781,550	133,387	130,318	788,956	51,910	1,994,686	13,122	29,874	101,303	1,882,499
Michigan.....	1,978,729	1,791,799	58,221	130,318	348,310	17,517	1,008,552	2,450	7,121	161,399	2,292,694
Minnesota.....	3,529,826	4,107,043	76,137	20,761	1,143,227	33,965	2,999,078	2,690	13,063	137,281	2,571,19
New Hampshire.....	3,489,294	3,048,159	138,865	70,741	903,311	38,254	2,786,924	2,690	13,063	137,281	2,571,19
New Jersey.....	52,852,240	59,754,254	1,148,844	891,979	14,080,410	92,812	3,919,483	28,544	158,682	3,117	67,130,296
New York.....	4,407,552	5,790,921	228,942	160,950	1,071,780	87,832	2,919,483	4,915	21,625	3,117	5,131,692
North Carolina.....	35,989,088	43,892,123	992,064	665,889	11,750,786	421,700	26,796,251	276,882	14,319	32,156	6,433,431
Pennsylvania.....	2,878,478	3,381,983	85,910	61,338	635,119	28,785	2,414,662	4,936	10,369	687,872	2,228,263
Rhode Island.....	755,398	576,254	19,787	41,530	723,766	42,916	370,549	4,008	7,510	48,093	3,865,792
South Carolina.....	3,054,790	3,265,867	83,171	41,530	723,766	42,916	370,549	4,008	7,510	48,093	3,865,792
Tennessee.....	311,224	3,890,322	10,111	12,749	17,597	17,597	1,071,453	15,038	5,673	46,921	1,745,670
Utah.....	1,043,082	2,219,821	65,233	22,300	503,224	28,727	1,441,489	28,284	5,158	7,807	2,462,787
Vermont.....	1,183,128	6,698,050	212,663	295,465	1,578,816	59,960	3,827,236	29,592	23,967	107,932	562,419
Virginia.....	1,094,415	1,036,765	60,278	13,532	1,353,435	10,897	522,279	10,321	2,734	.....	7,843,389
Wisconsin.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	3,976,193
All other States.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	1,201,136
United States.....	103,641,171	175,729,583	4,317,022	3,374,435	44,790,223	1,970,277	106,270,776	772,606	572,735	2,148,078	98,902,474

a "All other States" embrace: Colorado, 1 establishment; Idaho, 1; Kansas, 1; Kentucky, 2; Louisiana, 1; Mississippi, 1; Missouri, 2; Nebraska, 1; Oregon, 1; Texas, 1; Washington, 3; West Virginia, 2.

## INTRODUCTION.

TABLE 10.—DETAILED STATISTICS OF PERSONS ENGAGED IN THE HOSIERY AND KNT-GOODS INDUSTRIES, BY STATES, 1909.

[Thirteenth Census, Manufactures, Vol. X, p. 89.]

States.	Num-ber of estab-lish-ments.	Total.	Persons engaged in industry.					Wage earners.				Wage earners—number Dec. 15 or nearest representative day.				Pri-mary horse-power.
			Pro-duc-tors and firm mem-bers.	Sal-a-ried officers, super-intend-ents, and man-a-gers.	Clerks.		Average number.	Number 15th day of—		Total.	16 and over.		Under 16.			
					Male.	Female.		Maximum month.	Minimum month.		Male.	Female.	Male.	Female.		
Alabama.....	6	634	.....	15	6	2	611	De	667	645	156	312	60	117	750	
California.....	21	3,516	2	11	26	3,340	3,340	Au	289	284	40	242	24	85	44	
Connecticut.....	2	2,508	1	56	98	2,492	2,492	My	525	528	89	306	17	54	3,540	
Delaware.....	2	2,890	3	53	64	2,833	2,833	Fe	525	528	89	306	17	54	2,948	
Georgia.....	43	5,032	40	12	159	4,913	4,913	No	3,091	3,137	938	1,987	53	159	3,452	
Illinois.....	22	3,141	.....	52	63	3,133	3,133	Ja	2,897	2,926	550	1,140	180	218	1,393	
Indiana.....	5	2,032	.....	16	59	2,024	2,024	Ja	2,037	2,037	550	1,140	180	218	1,393	
Iowa.....	4	279	.....	13	9	268	268	Oc	2,108	2,084	550	1,140	180	218	1,393	
Maine.....	5	56	.....	13	9	268	268	Oc	2,108	2,084	550	1,140	180	218	1,393	
Massachusetts.....	11	1,062	7	10	2	45	45	Mh	52	52	23	66	.....	69	69	
Michigan.....	61	11,062	15	15	121	1,022	1,022	Ja	1,046	1,021	192	267	51	112	460	
Minnesota.....	35	2,618	37	110	121	2,545	2,545	No	10,399	10,287	4,284	5,549	128	326	9,113	
Montana.....	1	200	.....	17	28	1,059	1,059	Ja	1,071	1,071	237	274	21	50	3,291	
New Hampshire.....	21	2,200	.....	28	66	2,177	2,177	Ja	3,235	3,235	949	1,48	2	23	3,853	
New Jersey.....	37	3,223	25	38	10	3,126	3,126	No	3,246	3,011	1,034	2,044	27	37	2,315	
New York.....	380	37,673	302	479	655	35,950	35,950	No	37,244	38,419	13,289	24,424	465	549	1,477	
North Carolina.....	62	5,361	34	111	50	5,151	5,151	De	5,292	5,411	1,219	2,691	562	332	3,622	
Ohio.....	39	3,412	31	84	100	3,328	3,328	Ja	3,427	3,371	1,219	2,578	32	204	1,913	
Pennsylvania.....	464	40,248	509	651	583	38,206	38,206	No	39,911	40,326	7,766	28,045	1,124	3,391	21,797	
Rhode Island.....	17	1,849	9	28	18	1,774	1,774	De	1,835	1,880	374	1,374	9	123	1,626	
South Carolina.....	22	3,293	2	46	28	3,247	3,247	Au	3,833	3,832	263	375	68	86	697	
Tennessee.....	22	3,299	2	60	28	3,117	3,117	Ap	3,193	3,037	841	1,378	209	333	2,758	
Utah.....	1	212	.....	15	8	174	174	No	223	214	36	36	3	.....	80	
Vermont.....	8	1,780	7	10	7	1,715	1,715	No	1,000	983	341	631	96	132	1,079	
Virginia.....	11	1,780	7	34	22	1,715	1,715	No	1,000	983	341	631	96	132	1,079	
Wisconsin.....	61	4,659	28	98	183	4,282	4,282	De	4,513	4,513	797	3,286	69	411	2,312	
All other States <sup>a</sup> .....	17	1,251	9	36	16	1,181	1,181	.....	.....	.....	327	839	73	139	845	
United States.....	1,374	136,130	1,134	2,174	2,398	1,149	126,275	No	134,540	136,713	37,419	88,183	3,219	7,892	103,700	

a "All other States" embrace: Colorado, 1 establishment; Idaho, 1; Kansas, 1; Kentucky, 2; Louisiana, 1; Mississippi, 1; Missouri, 2; Nebraska, 1; Oregon, 1; Texas, 1; Washington, 3; West Virginia, 2.

The average number of wage earners in the industry during 1909 was 129,275. In Table 11 the number is distributed according to age, and in the case of those 16 years of age and over according to sex, for 1909, 1904, and 1899. As will be seen the wage earners are largely female. The percentages of females 16 years of age and over was approximately the same for 1899 and 1909, though that for 1904 was a little higher. Although the actual number of children has shown an increase at each succeeding census, the percentage which they have formed of the total number of wage earners has decreased.

TABLE 11.—AVERAGE NUMBER OF WAGE EARNERS IN THE HOSIERY AND KNIT GOODS INDUSTRIES, 1899, 1904, AND 1909.

[Thirteenth Census, Manufactures, Vol. X, p. 70.]

Classes.	1909		1904		1899	
	Number.	Per cent distribution.	Number.	Per cent distribution.	Number.	Per cent distribution.
16 years of age and over.....	118,769	91.9	94,405	90.7	75,022	89.6
Male.....	35,383	27.4	25,212	24.2	21,197	25.3
Female.....	83,386	64.5	69,193	66.5	53,825	64.3
Under 16 years of age.....	10,506	8.1	9,687	9.3	8,669	10.4
Total.....	129,275	100.0	104,092	100.0	83,691	100.0

The production of hosiery has increased much more rapidly than has the population. The population of the United States, exclusive of outlying possessions, was 75,994,575 in 1900 and 91,972,266 in 1910, an increase of 15,977,691, or 21 per cent.

While the population increased 21 per cent in the 10 years from 1900 to 1910, the production of hosiery increased 110.1 per cent in quantity and 150.6 per cent in value during the 10 years from 1899 to 1909.

The figures for the production in 1899, which was 358,846,788 pairs, if divided by the figures for the population 1900, which was 75,994,575, will show that the production was equal to 4.72 pairs per capita.

The figures for the production in 1909, which was 753,900,828 pairs, if divided by the figures for the population 1910, which was 91,972,266, will show that the production was equal to 8.2 pairs per capita.

No official figures regarding the development of the hosiery and knit-goods industries since 1909 will be available until the report of the Census of Manufactures in 1914 is issued. The data in Table 12, however, are compiled from a directory of the industry.

TABLE 12.—NUMBER OF MILLS MAKING FULL REGULAR AND SEAMLESS HOSIERY IN 1909 AND 1914, AS REPORTED IN DAVIDSON'S HOSIERY AND KNIT-GOODS TRADE DIRECTORY FOR 1909-10 AND 1914-15.

States.	1909				1914			
	Full regular.	Seamless.	Repetitions.	Net total.	Full regular.	Seamless.	Repetitions.	Net total.
Alabama.....	.....	6	.....	6	.....	4	.....	4
California.....	.....	3	.....	3	.....	1	.....	1
Colorado.....	1	.....	.....	1	.....	.....	.....	.....
Connecticut.....	1	7	.....	8	1	5	.....	6
Delaware.....	.....	4	.....	4	.....	3	.....	3
Georgia.....	1	21	.....	22	.....	19	.....	19
Illinois.....	4	22	4	22	2	22	2	22
Indiana.....	2	3	.....	3	.....	5	.....	5
Iowa.....	.....	2	.....	2	.....	3	.....	3
Kansas.....	.....	1	.....	1	.....	.....	.....	.....
Kentucky.....	.....	1	.....	1	.....	.....	.....	.....
Louisiana.....	.....	1	.....	1	.....	2	.....	2
Maine.....	.....	4	.....	4	2	.....	1	3
Maryland.....	.....	5	.....	5	.....	8	.....	8
Massachusetts.....	.....	20	.....	20	4	24	2	26
Michigan.....	3	11	2	12	2	14	2	14
Minnesota.....	2	4	1	5	2	4	1	5
Mississippi.....	.....	1	.....	1	.....	1	.....	1
Missouri.....	.....	2	.....	2	.....	1	.....	1
Nebraska.....	1	1	.....	1	.....	.....	.....	.....
New Hampshire.....	3	17	.....	17	3	17	.....	17
New Jersey.....	.....	7	.....	7	6	.....	.....	6
New York.....	7	13	.....	20	9	27	.....	33
North Carolina.....	3	60	.....	62	4	74	.....	77
Ohio.....	1	17	1	17	3	12	1	14
Oklahoma.....	.....	.....	.....	.....	.....	1	.....	1
Oregon.....	.....	2	.....	2	.....	.....	.....	.....
Pennsylvania.....	35	297	18	314	37	301	15	323
Rhode Island.....	1	5	.....	6	.....	5	.....	5
South Carolina.....	1	14	.....	14	2	.....	.....	2
Tennessee.....	4	20	2	22	1	25	.....	26
Texas.....	.....	1	.....	1	.....	1	.....	1
Utah.....	6	4	2	8	5	3	.....	8
Vermont.....	.....	3	.....	3	1	.....	.....	1
Virginia.....	.....	6	.....	6	.....	9	.....	9
Washington.....	.....	.....	.....	.....	1	.....	.....	1
West Virginia.....	.....	3	.....	3	.....	2	.....	2
Wisconsin.....	5	23	1	27	3	25	2	26
Total.....	88	611	42	657	93	647	36	704

According to the trade directory, there were in the United States 88 mills making full-fashioned hosiery in 1909 and 93 in 1914, and 611 making seamless hosiery in 1909 and 647 in 1914. The net total in 1909 was 657; in 1914 it was 704. The same directory shows an increase in the mills making knit underwear from 410 in 1909 to 448 in 1914.

The National Association of Hosiery and Underwear Manufacturers is an organization with headquarters in Philadelphia. In 1914 it had 292 active members, located as follows: Pennsylvania, 162; North Carolina, 24; New York, 20; Tennessee, 16; Georgia, 10; New Jersey, 9; Wisconsin, 7; Illinois, 6; Ohio and New Hampshire, 5 each; Maryland, Massachusetts, and Virginia, 4 each; Connecticut and Michigan, 3 each; Delaware, Indiana, Iowa, Louisiana, Maine, Minnesota, Missouri, Rhode Island, South Carolina, and Vermont, 1 each. Most of the members of this association manufacture hosiery exclusively.

The Knit Underwear Association, with headquarters in Utica, had, in 1914, about 35 active members, of whom three-fourths were in New York State.

## SCOPE AND METHOD OF INVESTIGATION.

This investigation of the cost of manufacturing hosiery was undertaken in compliance with the act of Congress approved August 23, 1912, which created the Bureau of Foreign and Domestic Commerce, and which contained the following section providing for investigations of the cost of production of articles dutiable in the United States:

Those certain duties of the Department of Labor, or Bureau of Labor, contained in section seven of the act approved June thirteenth, eighteen hundred and eighty-eight, that established the same, which especially charged it "to ascertain, at as early a date as possible, and whenever industrial changes shall make it essential, the cost of producing articles at the time dutiable in the United States, in leading countries where such articles are produced, by fully specified units of production, and under a classification showing the different elements of cost, or approximate cost, of such articles of production, including the wages paid in such industries per day, week, month, or year, or by the piece; the hours employed per day; and the profits of manufacturers and producers of such articles; and the comparative cost of living, and the kind of living; what articles are controlled by trusts or other combinations of capital, business operations, or labor, and what effect said trusts, or other combinations of capital, business operations, or labor have on production and prices," are hereby transferred to and shall hereafter be discharged by the Bureau of Foreign and Domestic Commerce, and it shall also be the duty of said Bureau of Foreign and Domestic Commerce to make such special investigation and report on particular subjects when required to do so by the President or either House of Congress.

The investigation was begun in March, 1914, and the field work was completed within five months. Special agents of the Bureau of Foreign and Domestic Commerce secured reports from 73 establishments. Of these establishments, 32 are located in Pennsylvania, where the industry is largely centered. The remaining 41 are located in the States of New Hampshire, Massachusetts, Rhode Island, New York, Maryland, North Carolina, South Carolina, Georgia, Tennessee, Ohio, Michigan, Indiana, Illinois, Wisconsin, and Missouri.

Reports were solicited only from representative establishments, but these establishments varied greatly in the amount of their business. The net sales of the 73 establishments varied from less than \$16,000 to nearly \$2,500,000 during their last business periods. The total net sales of the 73 establishments amounted to \$27,010,893, an average of \$370,012. According to the Census of Manufactures, the value of the hosiery produced in the United States in 1909 was \$68,721,825.<sup>a</sup> Of this amount the net sales of the 73 establishments that reported for this investigation is 39.3 per cent.

The object of the investigation was to ascertain the details of the cost of manufacturing hosiery, the income from sales and miscellaneous sources, and the profit made by each establishment during its last business year. The following form, called an establishment schedule, was printed for the entry of such data:

<sup>a</sup> Table 5, on p. 14 of this report, reproduced from Thirteenth Census, Manufactures, Vol. X, p. 79.

Establishment No. ....

CONFIDENTIAL.

Neither the name nor the location of the establishment is to appear on this schedule or in connection with any figures that are furnished.

UNITED STATES DEPARTMENT OF COMMERCE,  
BUREAU OF FOREIGN AND DOMESTIC COMMERCE,  
WASHINGTON.

## CLOTHING INDUSTRY—ESTABLISHMENT SCHEDULE.

1. Branch of clothing industry.....
2. Kinds of garments made in this factory.....
3. Individual, partnership, limited partnership, or corporation.....
4. Report for business year, beginning ....., 191..., and ending ....., 191....

## (A) MATERIAL COST.

Materials used in wearing apparel		Per cent imported.	Purchases during year at gross billed cost.
1. Yarn.....			\$.....
2. ....			.....
3. ....			.....
4. ....			.....
5. ....			.....
6. ....			.....
7. Buttons, thread, sundries.....			.....
8. Gross materials purchased.....			.....
9. Deduct returns and allowances.....			.....
10. Actual materials purchased.....			.....
11. Deduct discount taken during year.....			.....
12. Net materials purchased.....			.....
13. Freight and cartage inward, with proportionate stable or garage expense.....			.....
14. Cost of materials purchased, delivered.....			.....
15. Add inventory of materials at beginning of year.....			.....
16. Total.....			.....
17. Deduct inventory of materials at end of year.....			\$.....
18. Deduct sales of materials at net cost (enter profit on same at G-22; loss at G-11).....			.....
19. Deduct receipts from waste.....			.....
20. Total deductions.....			.....
21. Net cost of materials used.....			.....

## (B) DIRECT LABOR.

1. Wages of all employees in manufacturing occupations.....	.....
2. Paid to contractors.....	.....
3. Paid to home workers (by establishment, not by contract shops).....	.....
4. Total direct labor.....	.....



## (C) INDIRECT LABOR.

	Purchases dur- ing year at gross billed cost.
1. Salaries of officials, partners, or individual owner, chargeable to manufacturing.....	\$.....
2. Wages of factory superintendent, foremen, and forewomen.....	.....
3. Wages of designers.....	.....
4. Wages of employees in sample department.....	.....
5. Wages of other general help—machinist, clerks in factory (not general office), packing and shipping (not show room) hands, floor boys and girls, etc. (not including engineer and fireman shown at D-4).....	.....
6. Total indirect labor.....	.....

## (D) FACTORY EXPENSE.

1. Rent of space used for manufacturing and shipping departments (not including items at D-4).....	.....
2. Depreciation: Of buildings owned, \$.....; of machinery and fixtures, \$.....; total.....	.....
3. Repairs: To buildings (not including additions), \$.....; to machinery and fixtures (not including replacements), \$.....; total.....	.....
4. Power, heat (or fuel and wages of engineer and fireman), light, and water.....	.....
5. Cardboard boxes, cases, nails, and other packing materials.....	.....
6. Other factory expense (specify important items, entering "Miscellaneous expense" for balance).....	.....
7. ....	.....
8. ....	.....
9. Total factory expense.....	.....

## (E) COST OF ADMINISTRATION.

1. Salaries of officials, partners, or individual owner, not chargeable to indirect labor or cost to sell.....	.....
2. Salaries of general office force and auditor.....	.....
3. Rent of general office.....	.....
4. Office supplies, stationery, postage, telegrams, telephones.....	.....
5. Fire insurance (this year only): On buildings, \$.....; on machinery, stock, etc., \$.....; total.....	.....
6. Insurance—other kinds (this year only).....	.....
7. Workmen's compensation or employers' liability.....	.....
8. Welfare work, \$.....; charities, \$.....; total.....	.....
9. Expense of collection and legal service.....	.....
10. Bad debts apportioned to this year.....	.....
11. Corporation (not income) tax: United States, \$.....; State, \$.....; total.....	.....
12. State, county, township, and municipal taxes: On real estate, \$.....; on machinery, stock, etc., \$.....; total.....	.....
13. Other administrative expense (specify important items, entering "Miscellaneous expense" for balance).....	.....
14. ....	.....
15. ....	.....
16. Total cost of administration.....	.....

## (F) COST TO SELL.

1. Salaries of officials, partners, or individual owner, chargeable to sales department.....	.....
2. Salaries, commissions, traveling and general expense of salesmen.....	.....
3. Wages of other employees in sales department (not including packing and shipping help shown at C-5).....	.....
4. Rent of showroom.....	.....

Purchases dur-  
ing year at  
gross billed  
cost.

5. Freight and express charges prepaid and cartage outward, with proportionate stable or garage expense.....	\$.....
6. Advertising (not including advertising for help) and circularizing.....	.....
7. Other selling expense (specify important items, entering "Miscellaneous expense" for balance).....	.....
8. ....	.....
9. ....	.....
10. Total cost to sell.....	.....

## (G) PROFIT AND LOSS STATEMENT.

## Outgo.

1. Material cost (A-21).....	.....
2. Direct labor (B-4).....	.....
3. Indirect labor (C-6).....	.....
4. Factory expense (D-9).....	.....
5. Administrative cost (E-16).....	.....
6. Selling cost (F-10).....	.....
7. Garments purchased.....	.....
8. Inventory, except materials (A-15), beginning of year.....	.....
9. Interest.....	.....
10. Other expense items, on investments outside manufacturing business of this establishment: Specify.....	.....
11. ....	.....
12. ....	.....
13. Total outgo.....	.....
14. Profit.....	.....
15. Total.....	.....

## Income.

16. Gross sales, less returns and allowances.....	.....
17. Deduct discounts allowed.....	.....
18. Net sales.....	.....
19. Inventory, except materials (A-17), end of year.....	.....
20. Income from bank balances and interest on bills receivable, paid, or accrued.....	.....
21. Other income items, from investments outside manufacturing business of this establishment: Specify.....	.....
22. ....	.....
23. ....	.....
24. Total income.....	.....
25. Loss.....	.....
26. Total.....	.....
27. File with the schedule copies of profit and loss statements for previous years, as far back as possible. If unobtainable, give the following items (provided they can be obtained from the books), as far back as possible:	
Year ending ....., 19.. Net sales, \$....; profit, \$....; loss, \$....	
Year ending ....., 19.. Net sales, ....; profit, ....; loss, ....	
Year ending ....., 19.. Net sales, ....; profit, ....; loss, ....	
Year ending ....., 19.. Net sales, ....; profit, ....; loss, ....	
Year ending ....., 19.. Net sales, ....; profit, ....; loss, ....	
Year ending ....., 19.. Net sales, ....; profit, ....; loss, ....	

## (H) BALANCE SHEET.

File with the schedule copies of the balance sheets, showing assets and liabilities, at the beginning and end of the last business year and during the year, if any.  
Whenever practicable, file with the schedule copies of the balance sheets for previous years as far back as possible.

## (I) GENERAL INQUIRIES.

1. Increase of capital stock during year, amount, \$.....; date, ....., 191...
2. Was capital stock increased by stock dividend or cash sale?.....
3. Cost of new machinery purchased during year (not to be charged against cost of manufacturing), \$.....
4. Cost of other additions and betterments during year (not to be charged against cost of manufacturing), \$.....
5. Usual time and cash discount allowed to retailers, .....; to jobbers, .....; to commission houses which guarantee accounts, .....; which do not guarantee accounts, .....
6. Per cent of sales during year to domestic retailers, .....; to domestic jobbers, .....; to domestic commission houses which guarantee accounts, .....; which do not guarantee accounts, .....
7. Per cent of sales during year exported, .....; amount exported, \$..... If possible, specify amount exported to each country.
8. ....
9. ....
10. ....

## (J) NUMBER OF EMPLOYEES.

1. State average number engaged in direct labor (B-1), including helpers not on pay roll, and in indirect labor (C-2-3-4-5), and engineer and fireman (D-4), in the establishment (not contract shops) during 191..., by months:  
 January..... May..... September.....  
 February..... June..... October.....  
 March..... July..... November.....  
 April..... August..... December.....
2. Classify, as follows, such employees during the month (busy season) of ....., 191...:

16 years of age and over.				Under 16 years of age.			
Male.		Female.		Male.		Female.	
Time.	Piece.	Time.	Piece.	Time.	Piece.	Time.	Piece.
.....	.....	.....	.....	.....	.....	.....	.....

3. Officials or partners actively engaged in the business: Indirect labor (C-1), .....; administration (E-1), .....; cost to sell (F-1), .....; total (none counted twice), .....
4. What operations in making or trimming garments are performed by contract?.....
5. Enter under "Remarks" the names and addresses of contractors, stating whether their shops are inside or outside the establishment and whether or not they work for this establishment exclusively.

## (K) REMARKS.

.....  
 .....  
 .....  
 Foregoing data furnished, ....., 191..., to Special Agent .....

Agents of the Bureau of Foreign and Domestic Commerce visited the establishments and requested permission to examine the books of accounts in order to obtain the desired details. Assurance was given that the information would be regarded as confidential and

would not be used in such a way that the establishments could be identified. The form of this assurance was as follows:

DEPARTMENT OF COMMERCE,  
 BUREAU OF FOREIGN AND DOMESTIC COMMERCE,  
 Washington.  
 CONFIDENTIAL.

(One copy of this agreement to be retained by the manufacturer and one copy to be forwarded to the chief of the bureau.)

The information which has been given to Mr. ...., special agent of the Bureau of Foreign and Domestic Commerce, is furnished with the understanding that the name or address of the establishment will not be written on the schedule; that the information on the schedule will be considered by the Bureau and its special agents as absolutely confidential; that it will not be divulged; and that it will not be published in such a way that the identity of the establishment will be shown.

This information, which appears on establishment schedule No. ...., has been obtained from the books and from the officers of the establishment, and, to the best of our knowledge, is correct.

(Special agent's signature) .....  
 (Manufacturer's signature) .....

Date, ....., 191-.

The investigation was opposed at the annual convention of the National Hosiery and Underwear Manufacturers held in Philadelphia May 12-14, 1914. The following preamble and resolution were unanimously passed at this convention:

Whereas the investigations that have been authorized by Congress and which are being made under the direction of the Department of Commerce at Washington as to the cost of manufacture in connection with the present business conditions as the basis for determining the defects of the Underwood-Simmons tariff bill in its relation to manufacturing interests would not at this time be a true reflection of the actual results of the new tariff bill: Therefore be it

*Resolved*, That we recommend to the Department of Commerce that these investigations be postponed until at least a year after the Underwood-Simmons bill became a law, for the reason that practically all manufacturers are still operating on orders taken prior to the passage of the new bill; hence the adverse effects can not be felt until old orders have been exhausted.<sup>a</sup>

On account of this action a number of manufacturers refused to comply with the request to furnish data regarding the cost of production of their establishments. The number that refused was 24, of whom 15 were in Philadelphia. Notwithstanding this action of the convention, reports were secured from 36 members of the National Hosiery and Underwear Manufacturers who manufactured hosiery and from 14 members who manufactured knit underwear.

The information secured during the investigation was obtained directly from the manufacturers and from their books. No data regarding the cost of production were accepted that the agents did not find recorded on the books of the establishments reporting. From data entered on the establishment schedules the figures were derived which show the various items of the cost of production and also the percentages of profit on net sales and on the capital employed in the business.

The further object of the investigation was to ascertain the details of the cost of manufacturing specified styles of hosiery. The following form, called a unit schedule, was prepared for the entry of such data.

<sup>a</sup> Textile Manufacturers' Journal, May 16, 1914, p. 35.

CONFIDENTIAL.

Establishment No. ....

UNITED STATES DEPARTMENT OF COMMERCE,  
BUREAU OF FOREIGN AND DOMESTIC COMMERCE,  
WASHINGTON.

## UNIT SCHEDULE—HOSIERY.

Unit schedules should be obtained for men's hose, women's hose, children's hose, or infants' hose.

Unit: One.....

A unit schedule should be used for each unit.

## (A) WHOLESALE AND RETAIL PRICES.

Usual original retail price.	Price to jobbers.			Price to retailers.		
	Gross price.	Usual per cent discount.	Net price.	Gross price.	Usual per cent discount.	Net price.
Style A, \$.....	\$.....	.....	\$.....	\$.....	.....	\$.....
Style B, \$.....	.....	.....	.....	.....	.....	.....
Style C, \$.....	.....	.....	.....	.....	.....	.....
Style D, \$.....	.....	.....	.....	.....	.....	.....
Style E, \$.....	.....	.....	.....	.....	.....	.....
Style F, \$.....	.....	.....	.....	.....	.....	.....

Secure samples of hosiery for each style.

## (B) DESCRIPTIONS OF HOSIERY.

Specifications.	Style A.	Style B.	Style C.	Style D.	Style E.	Style F.
1. For.....	.....	.....	.....	.....	.....	.....
2. Yarn.....	.....	.....	.....	.....	.....	.....
3. Made.....	.....	.....	.....	.....	.....	.....
4. Welt.....	.....	.....	.....	.....	.....	.....
5. Heel.....	.....	.....	.....	.....	.....	.....
6. Toes.....	.....	.....	.....	.....	.....	.....
6. Needles.....	.....	.....	.....	.....	.....	.....

- Men, women, children, or infants.
- Cotton, wool, worsted, silk, or artificial silk. Abbreviate to C., W., Wd., S., or A. S., and hyphenate any two kinds used.
- Seamless or full fashioned.
- Selvaged or ribbed top or sewed or integral welt.
- Looped or sewed.
- Number per inch on flat machines. Outside diameter of cylinder in inches and number of needles in circumference on circular machines, as "3½-220."

## (C) MATERIALS USED IN UNIT.

Specifications.	Style A.	Style B.	Style C.	Style D.	Style E.	Style F.
1. Kind.....	.....	.....	.....	.....	.....	.....
2. Ounces.....	.....	.....	.....	.....	.....	.....
3. Price per pound.....	\$.....	\$.....	\$.....	\$.....	\$.....	\$.....
4. Cost.....	\$.....	\$.....	\$.....	\$.....	\$.....	\$.....
5. Kind.....	.....	.....	.....	.....	.....	.....
6. Ounces.....	.....	.....	.....	.....	.....	.....
7. Price per pound.....	\$.....	\$.....	\$.....	\$.....	\$.....	\$.....
8. Cost.....	\$.....	\$.....	\$.....	\$.....	\$.....	\$.....
9. Kind.....	.....	.....	.....	.....	.....	.....
10. Ounces.....	.....	.....	.....	.....	.....	.....
11. Price per pound.....	\$.....	\$.....	\$.....	\$.....	\$.....	\$.....
12. Cost.....	\$.....	\$.....	\$.....	\$.....	\$.....	\$.....
13. Kind.....	.....	.....	.....	.....	.....	.....
14. Ounces.....	.....	.....	.....	.....	.....	.....
15. Price per pound.....	\$.....	\$.....	\$.....	\$.....	\$.....	\$.....
16. Cost.....	\$.....	\$.....	\$.....	\$.....	\$.....	\$.....
17. Total yarn cost.....	\$.....	\$.....	\$.....	\$.....	\$.....	\$.....

- 1, 5, 9, 13. Trade name, abbreviated as directed on list of yarns.
- 2, 6, 10, 14. Used in making 1 dozen pairs of hose.
- 3, 7, 11, 15. Present gross price per pound.
- 4, 8, 12, 16. Gross cost of each kind of yarn used in making unit.
17. Gross cost of all kinds used in unit.

## (D) COST OF MATERIALS IN UNIT.

Items.	Style A.	Style B.	Style C.	Style D.	Style E.	Style F.
1. Findings.....	\$.....	\$.....	\$.....	\$.....	\$.....	\$.....
2. Boxes.....	.....	.....	.....	.....	.....	.....
3. Needles.....	.....	.....	.....	.....	.....	.....
4. Seconds.....	.....	.....	.....	.....	.....	.....
5. Gross cost, sundries.....	\$.....	\$.....	\$.....	\$.....	\$.....	\$.....
6. Gross cost, yarn (C-17).....	.....	.....	.....	.....	.....	.....
7. Total gross cost, all materials.....	.....	.....	.....	.....	.....	.....
8. Discount at — per cent, amount.....	.....	.....	.....	.....	.....	.....
9. Net cost all materials.....	.....	.....	.....	.....	.....	.....

- Total all materials not specified, but not to include cost of chemicals used in bleaching or dyeing.
- Cardboard boxes, also paper, twine, and labels.
- Includes waste.
- Percentage A-11 is of A-10 on the establishment schedule.

## (E) DIRECT LABOR COST OF UNIT.

Operations.	Style A.	Style B.	Style C.	Style D.	Style E.	Style F.
1. Bleaching or dyeing.....	\$.....	\$.....	\$.....	\$.....	\$.....	\$.....
2. Winding and knitting.....	.....	.....	.....	.....	.....	.....
3. Looping.....	.....	.....	.....	.....	.....	.....
4. Sewing.....	.....	.....	.....	.....	.....	.....
5. Finishing.....	.....	.....	.....	.....	.....	.....
6. Total direct labor.....	.....	.....	.....	.....	.....	.....

- Includes cost of chemicals.
- Includes ribbing.
- Sewing heels or toes of hose.
- Includes boarding, boxing, and all operations not specified.

## (F) TOTAL NET COST OF UNIT.

Summary.	Style A.	Style B.	Style C.	Style D.	Style E.	Style F.
1. Material (D-9).....	\$.....	\$.....	\$.....	\$.....	\$.....	\$.....
2. Direct labor (E-6).....	\$.....	\$.....	\$.....	\$.....	\$.....	\$.....
3. Overhead charges, as computed by establishment..	\$.....	\$.....	\$.....	\$.....	\$.....	\$.....
4. Total net cost.....	\$.....	\$.....	\$.....	\$.....	\$.....	\$.....

Each unit was one dozen garments of a specified style. The amount paid for each kind of material used was ascertained, also the amount paid for each direct labor operation. These items the manufacturers could easily give. What the trade commonly calls "overhead" was found by computation, according to the method called "the dual method," explained on page 156, in a section of this report headed "Simplified cost accounting."

Many manufacturers were interviewed by special agents of the Bureau of Foreign and Domestic Commerce in regard to subjects relating to the knit underwear industry that were not included in either the establishment schedule or unit schedule, and much valuable information regarding general trade conditions was thus obtained.

By arrangement with the Secretary of Labor, special agents of the Bureau of Labor Statistics gathered information from manufacturers of hosiery in regard to the number of their employees, the hours of work, the weekly earnings, and the working conditions of the employees in 1914. Such information is presented under the heading "Wages and hours of labor," pages 198 to 217 of this report.

The plan of the Bureau of Foreign and Domestic Commerce to obtain data regarding the cost of production of knit underwear in European countries was interrupted by the beginning of the war in Europe in August, 1914.

## SUMMARY.

## CAPITAL, PROFIT, AND TURNOVER.

The 73 establishments for which data were obtained reported capital employed in business amounting to \$15,548,885, an average of \$212,988 per establishment.

In tabulating the data the establishments were divided into seven groups, according to materials used, according to product, and to some extent according to locations. These seven groups are as follows:

Group I includes 9 mills knitting full-fashioned hose, or both full-fashioned and seamless hose, made of silk or cotton or silk and cotton mixed. Of these mills 4 made full-fashioned hose exclusively and 5 made full-fashioned and seamless hose. Of the 9 mills 5 were in Pennsylvania and 1 each in Massachusetts, Rhode Island, New York, and Indiana.

Group II includes 16 northern mills knitting seamless cotton hosiery (15 in Pennsylvania and 1 in New York).

Group III includes 16 southern mills knitting seamless cotton hosiery (6 in Georgia, 4 in North Carolina, 3 in Maryland, and 1 each in South Carolina, Tennessee, and Missouri).

Group IV includes 11 mills knitting seamless hosiery of silk or of cotton and silk mixtures (all in Pennsylvania).

Group V includes 9 mills knitting seamless hosiery of silk or of cotton and silk mixtures (4 in Wisconsin, 3 in Ohio, and 2 in Illinois).

Group VI includes 4 mills knitting seamless hosiery of wool, worsted, merino, and cotton mixtures (2 in Illinois and 1 each in Pennsylvania and Maryland).

Group VII includes 8 mills that spin all or some of their yarns and knit seamless hosiery, mostly of wool, merino, and cotton mixtures (4 in New Hampshire and 1 each in Massachusetts, Rhode Island, Michigan, and Wisconsin).

The reports show great differences in the percentage of profit earned by hosiery factories. The fact that a factory had a loss or made a very small profit may have been due to several causes, such as (a) poor shop management, (b) antiquated machinery, (c) poor cost-accounting system, (d) poor selling methods, (e) too little care in extending credits, (f) lack of sufficient capital, (g) too much withdrawn from the business by the owner, partners, or officers.

Of the 73 establishments reporting, 55 earned manufacturing profits and 18 had losses.

The average manufacturing profit on net sales was 6.66 per cent, and 31 establishments had a manufacturing profit of more than 5 per cent on net sales.

The average manufacturing profit on capital employed in business was 11.56 per cent, and 28 establishments had a manufacturing profit of more than 10 per cent on capital employed in business.



The per cent of manufacturing profit on the investment and the net sales is shown by groups in Table 13.

TABLE 13.—PERCENTAGES OF MANUFACTURING PROFITS, BY GROUPS AND COMBINATIONS OF GROUPS OF ESTABLISHMENTS.

Classification.	Groups.	Establishments.	Per cent of manufacturing profit on—	
			Capital employed in business.	Net sales.
All mills reporting data.....	I to VII.....	73	11.56	6.66
Mills making—				
Seamless hosiery.....	II to VII.....	64	9.60	5.52
Seamless hosiery and buying all yarns.....	II to VI.....	56	9.41	5.05
Full-fashioned or both full-fashioned and seamless hosiery (East and West).....	I.....	9	15.50	8.92
Seamless cotton hosiery (Pennsylvania and New York).....	II.....	16	2.95	1.76
Seamless cotton hosiery (South).....	III.....	16	14.30	7.60
Seamless hosiery of cotton and silk (Pennsylvania).....	IV.....	11	6.85	3.83
Seamless hosiery of cotton and silk (West).....	V.....	9	14.68	6.56
Seamless hosiery of wool and cotton mixed (East, West, and South).....	VI.....	4	4.05	2.92
Seamless hosiery and spinning yarns (East and West).....	VII.....	8	10.07	7.08

As shown by the foregoing table, the per cent of manufacturing profit earned by all mills reporting, Groups I to VII, was 11.56 on capital employed in business and 6.66 on net sales.

The per cent earned by all mills making seamless hosiery (Groups II to VII) was 9.60 on capital employed in business and 5.52 on net sales.

The per cent earned by all mills making seamless hosiery and buying all yarns (Groups II to VI) was 9.41 on capital employed in business and 5.05 on net sales.

The group showing the highest percentage of profit is Group I, composed of mills making full-fashioned or full-fashioned and seamless hosiery, in which the percentage was 15.5 on capital employed in business and 8.92 on net sales.

Most of the full-fashioned hosiery manufactured in the United States is made of silk or partly of silk, and most of the seamless hosiery is made of cotton. Under tariff acts previous to the one that went into effect on October 4, 1913, the rate of duty on cotton hosiery was higher than the rate on silk hosiery. This led to a very rapid increase in the production of seamless cotton hosiery, which resulted in severe competition among domestic manufacturers of that product. The more rapid increase in the manufacture of seamless hosiery than of full-fashioned hosiery in the United States is probably due to the fact that machinery for seamless hosiery is much less expensive than full-fashioning machinery and to the fact that much less skill is required to operate the former than the latter.

Of the mills making seamless cotton hosiery, the average percentage of profit earned by the mills in Group III, composed of 16 mills located in the South, was nearly five times as large as the average percentage earned by the mills in Group II, composed of 15 mills in Pennsylvania and 1 in New York. This great difference may be accounted for to some extent by the higher wages paid in Pennsylvania mills than in southern mills, but may also be explained in

part by the fact that, generally speaking, the mills in the South, as well as those in the West, are of more recent construction and are equipped with more modern machinery than are most of the mills in Pennsylvania.

Table 13 shows that the profit on capital employed in business was nearly twice as much as the profit on net sales. While some establishments made small percentages of profit on their net sales, they made large percentages of profit on the capital actually invested in the business. This was due to the fact that in some establishments the capital was turned over more frequently than in others. The ratio of the net sales to the capital employed is shown in Table 14.

TABLE 14.—CAPITAL TURNOVER OR RATIO OF NET SALES, TO CAPITAL EMPLOYED IN THE BUSINESS, BY GROUPS AND COMBINATIONS OF GROUPS OF ESTABLISHMENTS.

Classification.	Groups.	Establishments.	Ratio of net sales to capital.
All mills reporting data.....	I to VII.....	73	1.74
Mills making—			
Seamless hosiery.....	II to VII.....	64	1.74
Seamless hosiery and buying all yarns.....	II to VI.....	56	1.86
Full-fashioned or both full-fashioned and seamless hosiery (East and West).....	I.....	9	1.74
Seamless cotton hosiery (Pennsylvania and New York).....	II.....	16	1.67
Seamless cotton hosiery (South).....	III.....	16	1.88
Seamless hosiery of cotton and silk (Pennsylvania).....	IV.....	11	1.79
Seamless hosiery of cotton and silk (West).....	V.....	9	2.24
Seamless hosiery of wool and cotton mixed (East, West, and South).....	VI.....	4	1.75
Seamless hosiery, and spinning yarns (East and West).....	VII.....	8	1.46

The ratio of the average net sales to the capital employed varied from 1.46 in Group VII to 2.24 in Group V, the average for all establishments (Groups I to VII) being 1.74.

In considering the foregoing tables, it should be understood that the salaries of active officers and of partners were included in the cost of production before profits were figured. Likewise, in the case of an individual owner of an establishment, the costs included the estimated amount he would have to pay an employee for service such as he himself performed.

It is important also to understand that before profits were figured all expenses for selling were included in the cost of production.

Furthermore, depreciation was added as an expense before profits and losses were computed. It was calculated on the inventoried value of the machinery and fixtures at the rate of 5 per cent in full-fashioning mills and 10 per cent in seamless-hosiery mills. Many establishments kept no depreciation account on their books and did not take it into consideration in figuring profits or losses. Of the 73 establishments, only 20 had reserves for depreciation. Some establishments which showed on their books profits earned during their last business years showed losses when depreciation was added to other expenses.

#### COST AND PROFIT BY GROUPS OF ESTABLISHMENTS.

The data furnished by the 73 establishments reporting show that during their last business year their net sales averaged \$370,012 per establishment, and the cost of the goods they sold averaged \$345,385. Their manufacturing profit averaged \$24,627 and their final profit \$20,927.

Tables 15 and 16 show, by groups and summaries of groups, the average net sales, cost of goods sold, manufacturing profit and final profit, and the percentages of cost based on the total manufacturing and selling expense of the establishments during their last business year or period.

TABLE 15.—NET SALES, COST OF GOODS SOLD, AND MANUFACTURING AND FINAL PROFIT, BY GROUPS AND COMBINATIONS OF GROUPS OF ESTABLISHMENTS.

Classification.	Groups.	Estab-lish-ments.	Average per establishment.			
			Net sales.	Cost of goods sold.	Manu-facturing profit.	Final profit.
All mills reporting data.....	I to VII...	73	\$370,012	\$345,385	\$24,627	\$20,927
Mills making—						
Seamless hosiery.....	II to VII..	64	281,433	265,887	15,546	12,599
Seamless hosiery and buying all yarns.	II to VI...	56	246,692	234,228	12,464	9,505
Full-fashioned, or both full-fashioned and seamless hosiery (East and West).	I.....	9	999,909	910,704	89,205	80,148
Seamless cotton hosiery (Pennsylvania and New York).	II.....	16	162,685	150,819	2,866	a 500
Seamless cotton hosiery (South).....	III.....	16	284,944	263,288	21,656	18,701
Seamless hosiery of cotton and silk (Pennsylvania).	IV.....	11	229,890	221,086	8,804	7,599
Seamless hosiery of cotton and silk (West).	V.....	9	296,142	276,701	19,441	14,956
Seamless hosiery of wool and cotton mixed (East, West, and South).	VI.....	4	364,659	356,201	8,458	5,713
Seamless hosiery and spinning yarns (East and West).	VII.....	8	524,618	497,502	27,116	24,256

a Loss.

TABLE 16.—PERCENTAGES OF AVERAGE COSTS, BY SPECIFIED ITEMS AND BY GROUPS OF ESTABLISHMENTS, BASED ON THE TOTAL MANUFACTURING AND SELLING EXPENSE.

Classification.	Groups.	Estab-lish-ments.	Per cent of total cost of goods manufactured.				
			Raw material.	Direct labor.	Indirect labor.	Factory expense.	Administrative expense.
All mills reporting data.....	I to VII...	73	52.82	24.73	4.38	5.47	3.20
Mills making—							
Seamless hosiery.....	II to VII..	64	53.47	22.69	4.37	5.60	3.54
Seamless hosiery and buying all yarns.	II to VI...	56	55.15	21.83	3.91	5.34	3.59
Full-fashioned or both full-fashioned and seamless hosiery (East and West).	I.....	9	51.35	29.35	4.41	5.17	2.43
Seamless cotton hosiery (Pennsylvania and New York).	II.....	16	52.99	25.28	4.17	6.28	3.04
Seamless cotton hosiery (South).	III.....	16	58.52	21.22	4.15	5.80	3.57
Seamless hosiery of cotton and silk (Pennsylvania).	IV.....	11	51.89	26.96	5.16	4.68	3.86
Seamless hosiery of cotton and silk (West).	V.....	9	46.85	17.76	3.33	4.69	4.51
Seamless hosiery of wool and cotton mixed (East, West, and South).	VI.....	4	70.25	15.68	1.67	4.76	2.52
Seamless hosiery and spinning yarns (East and West).	VII.....	8	47.51	25.75	6.01	6.52	3.34

Success in the hosiery industry depends largely upon the good judgment of the manufacturer in buying cotton, wool, cotton yarns, woolen yarns, or silk yarns. Other factors of success are the possession of sufficient capital, modern factory equipment, efficient factory management, and the efficiency of the selling organization. It is practically impossible to trace statistically the effect of each of these reasons for successful business, but a study of the percentages of the item of cost of the product, as shown by tables in the body of this report, will, at least to some extent, indicate whether or not the general management of an establishment is efficient.

For good business reasons an establishment may have a larger proportionate expense than the average for materials, for direct labor, and for indirect labor, and many establishments have found it profitable to spend more than the average for selling—that is, to pay higher salaries or commissions for salesmen of unusual ability—but if the percentages for many items are much greater than the average of similar establishments, the profits, if any, will be below that of the average.

It should, however, not be assumed that an establishment whose proportion of expenditure for labor was less than that of other establishments paid lower salaries or wages to its employees than did the others. On the contrary, the earnings of individual employees might be greater in an establishment with a low percentage of labor cost, because of the fact that they were more skilled than ordinary employees, or because superior shop arrangements or better management enabled them to turn out a larger product per worker than could be done by workers in other factories.

Among the 73 establishments that reported data there were large variations in the percentages of cost of production and the percentages of profit. Of the 73 establishments, 11 made a manufacturing profit of over 10 per cent on net sales and 18 did business at a loss.

Of the 11 establishments with a manufacturing profit of over 10 per cent, the percentages for direct labor of 7 were higher and of 4 were lower than those of their respective groups or of the general average.

Of the 18 establishments having losses, the percentages for direct labor of 13 were higher and of 5 were lower than those of their respective groups or of the general average.

#### COST AND PROFIT BY SPECIFIED UNITS.

From many of the establishments that made reports details were obtained with regard to the cost of producing specific styles of hosiery. Manufacturers, even those that are most unsystematic in cost accounting, are always able to tell what is the cost of the direct labor in a dozen pairs of hose, a dozen being the trade unit of production. They can easily do this, because practically all direct labor operations are performed by pieceworkers. The manufacturer also can easily tell the quantity and cost of the material that is used in making a dozen pairs of any style.

The "overhead" charges on all units specified in this report were computed according to a uniform method, on the basis of the overhead expenses of the establishment during its last business year, as shown by the establishment schedule.

Some establishments have such crude systems for cost finding that they do not know exactly, or even approximately, their profit or loss on certain styles. Such unsystematic establishments may continue for a long time to sell particular styles of hose at a loss without knowing it. Some establishments, however, knowing accurately what a certain style costs, will sell it on a small margin of profit, or even at a loss, for the purpose of attracting custom for more profitable styles. An establishment may find it necessary to carry a complete line of styles in order to meet the demands of its customers and to hold its trade, and may consider it good business policy to sell at or below cost certain styles to customers who will buy higher priced goods on which a good profit is realized.

In examining the data relating to the cost of the units specified in this report one is struck with the great differences in the profits on the various grades of hosiery. These differences occur on hosiery of the same grade, and even on hosiery of practically the same grade made by the same establishment. Table 17 shows the average percentages of manufacturing profit on ladies' hosiery of high, medium, and low grades.

TABLE 17.—PERCENTAGES OF MANUFACTURING PROFITS ON HIGH, MEDIUM, AND LOW GRADES OF HOSIERY, BASED ON THE AVERAGE NET PRICE PER DOZEN PAIRS SOLD TO RETAILERS.

Description.	High grade.	Medium grade.	Low grade.
Ladies' full-fashioned hose.....	a 15.21	b 11.83	c d 2.72
Ladies' seamless cotton hose.....	25.17	14.61	4.70

a One style of silk and 3 of silk and cotton. b Mercerized cotton. c Cotton. d Loss.

The percentages of profit on the grades of full-fashioned hosiery for which data were secured were not so large as the percentages of profit on seamless hosiery for which data were secured, although the establishment tables show that the mills reporting which made full-fashioned hosiery earned a greater average percentage of profit than the mills reporting which made seamless hosiery.

The competition with foreign-made hosiery is almost entirely on low-priced full-fashioned hosiery. This low-priced product is made of cotton, and the duty on it varies from 30 to 50 per cent ad valorem, according to value. Medium and high priced full-fashioned hosiery is made of silk or mostly of silk and mercerized cotton and the duty of 50 per cent on such a product, covering both the expensive silk material and labor, is sufficient to exclude foreign competition.

It will be observed that the percentage of profit on the ladies' seamless cotton hose was very much higher on the high grades than on the medium grades, and also very much higher on the medium grades than on the low grades.

#### MANUFACTURING CONDITIONS.

A long-established custom compels retailers to sell hosiery at fixed prices—25 cents, 50 cents, \$1, etc. The public, educated to these prices, looks with suspicion on odd-priced goods. The standard retail prices are a great handicap to the manufacturer. He must always figure his cost of production with these fixed retail prices in view.

During recent years the expenses of retailers for rent, salaries, advertising, and delivery have largely increased. Not being able to increase the prices at which hosiery is sold, retailers must purchase goods cheaper than they formerly did. The jobber who sells to the retailer must, to make his former profit, sell cheaper than he did formerly, and therefore must buy cheaper from the manufacturer. But the cost of manufacturing has been increased by the higher cost of labor and materials, by the demand for finer goods, by the necessity for constantly purchasing machinery, and by the enactment of workingmen's compensation acts and stricter child-labor laws. While the expenses of manufacturers have thus largely increased, they are compelled to sell goods cheaper than formerly. This condition leads to cut-throat competition among them. Many of them believe that they would be greatly benefited if hosiery were retailed at odd amounts.

There is a tendency toward larger factories in the hosiery and knit-goods industries. As shown by the Census of Manufactures, there were 1,006 such factories in 1899, and they had 83,691 employees, an average of 83 employees per factory, while 10 years later there were 1,374 factories, with 129,275 employees, an average of 94 employees per factory. The table giving the percentages of profit of the establishments reporting in this investigation shows that there were no decided differences in these percentages between the smaller and the larger establishments.

In former years, when competition was less keen, many hosiery factories which started on a very limited capital were successful. At that time profits were sufficient to stand the enormous drain due to cancellations, inefficient methods, etc. At the present time, when profits have been reduced, due to competition resulting from great expansion of the business, there is absolute need of putting manufacturing establishments on an economical and efficient basis. Formerly a badly located, poorly managed, inefficient plant could make a profit. Now all is changed, and the manufacturer of hosiery, in order to attain success, must have a mill equipped with up-to-date machinery, managed in an economical and scientific manner, with a system of cost accounting which will enable him at all times to know the true condition of his business and the actual cost of every article produced.

#### SIMPLIFIED COST ACCOUNTING.

The hosiery and knit-goods industries in the United States suffer from the lack of an adequate cost-finding system to determine the actual costs of certain grades of the production. There is a variety of methods of calculating the charge for general expense, and many of them are very crude. This leads to unintelligent price making and ruinous competition.

A very few factories have, at considerable expense, installed cost-finding systems, while some others seem to have almost no system at all. Some manufacturers who have adopted a really scientific cost-finding system have learned that they could not sell certain grades of goods at prices based on costs found by the system, because competitors who calculated costs by an imperfect method would undersell them.

Most manufacturers of hosiery and knit goods admit that the lack of an accurate and uniform method of cost finding is a drawback which seriously interferes with the prosperity of the industry. The



matter has been discussed in the trade journals and in the annual meetings of the trade associations as one of the questions of greatest importance to the industry, but so far without results.

The National Association of Hosiery and Underwear Manufacturers has considered the matter for years, but has been unable to agree on a standard for distributing overhead expense. An address on "Operating costs and economies," read before the annual convention of the association at its convention held in Philadelphia in 1914, shows how much at sea manufacturers of hosiery and knit goods are with regard to cost accounting. The proceedings of the convention say:

At the conclusion of this address the president remarked that the committee on cost accounting, which was appointed last year, has been carefully considering this subject, but that it has not arrived at any definite conclusion as to the best methods of cost accounting, and asked that the committee be continued.

On the units specified in this report the "overhead" charges were computed according to a uniform method, which is explained under "The dual method," in a section of the report headed "Simplified cost accounting" (p. 153). The overhead for indirect labor and for factory expense was computed on the basis of the direct labor, and the overhead for administrative and selling costs were computed on the selling price.

#### SELLING METHODS.

Data secured from the 73 hosiery establishments reporting show that of their total net sales 51.04 per cent was made to jobbers, 4.08 per cent through commission houses, 44.83 per cent to retailers, and 0.05 per cent was exported.

The average manufacturing profit on the net sales of establishments that sold more than 50 per cent to jobbers or through commission houses was 6.56 per cent, and of establishments that sold more than 50 per cent to retailers, 7.18 per cent.

Among hosiery manufacturers there has been in recent years a decided tendency to change from selling to jobbers to selling direct to retailers. This tendency is particularly noticeable among western manufacturers.

The manufacturer who sells direct to the retail trade is put to much greater selling expense than would be required to market his goods if he sold to jobbers or through commission houses. Further, he has to manufacture and carry a much more diversified and larger stock of finished goods. He also has to wait longer for his money and undergoes a greater risk of loss through bad accounts.

On the other hand, the manufacturer who sells to retailers receives higher prices for his goods, and once a line of customers has been established he is more certain to hold them than is the case when he deals with jobbers. Besides making larger profits, the producer who sells to retailers has a greater opportunity for expanding and enlarging his business than one who ties himself up with jobbers or commission houses.

One reason why some hosiery manufacturers have not been prosperous during recent years is on account of the large initial expense of changing from selling to jobbers to selling to retailers. In the process of building up a trade with retailers an establishment incurs large expense, and therefore it may have small profits, or perhaps losses, in the beginning, but after it has established a trade with

retailers its profits may be greater than they were when the larger part of its product was sold to jobbers.

The advantages in selling to jobbers or through commission houses are that the manufacturer is relieved of great expense for actual selling and advertising, is not so liable to losses due to bad debts, and has the advantage of knowing ahead just about what his business for the year will be. Many jobbers and commission houses will advance money to manufacturers, and this is a distinct advantage to the producer who has limited capital.

The average percentages of selling cost and manufacturing profit, based on net sales, for the establishments in different group combinations were as follows:

All establishments reporting: Total selling cost, 8.31 per cent, of which salaries, commissions, and expense of salesmen were 4.54 per cent; manufacturing profits, 6.66 per cent.

Establishments making seamless hosiery: Total selling cost, 9.5 per cent, of which salaries, commissions, and expense of salesmen were 4.91 per cent; manufacturing profits, 5.52 per cent.

Establishments making seamless hosiery and buying all of their yarns: Total selling cost, 9.52 per cent, of which salaries, commissions, and expense of salesmen were 4.35 per cent; manufacturing profits, 5.05 per cent.

Establishments making seamless hosiery of cotton and buying all of their yarns: Total selling costs, 6.54 per cent, of which salaries, commissions, and expense of salesmen were 4.06 per cent; manufacturing profit, 5.48 per cent.

The cost of advertising is a considerable proportion of the total selling expense of some manufacturers that sell to retailers. Of the 73 establishments reporting, 9 advertised nationally—that is, advertised in magazines and papers with a national circulation, other than trade journals.

Of these 9 manufacturers, 6 sold 100 per cent of their product to retailers; 1 sold 98 per cent to retailers, exporting 2 per cent; 1 sold 50 per cent to retailers and 50 per cent to jobbers; and 1 did not state to whom he sold. Four of these manufacturers had a larger percentage of profit than the average of their respective groups, 4 had a smaller percentage of profit than the average of their respective groups, and 1 had a loss.

One of the greatest evils from which the hosiery industry suffers is that of cancellations. The prices of cotton and wool are constantly fluctuating and often fluctuate greatly within a few months. If the prices of materials should fall, the market price of hosiery would naturally fall, and a buyer who puts in a blanket order to be delivered after several months can, by cancellation of a considerable part of the order, put a heavy loss on the manufacturer.

#### HOSIERY PRODUCTS.

Hosiery may be seamless, full fashioned, or cut up. Seamless hosiery is knit without seams on a circular machine. Full-fashioned hosiery is knit on a flat-frame machine and in the proper form to make a stocking or sock when it is closed by seaming or looping. It conforms to the shape of the foot, ankle, and leg better than seamless hosiery. Cut-up hosiery, of which very little is manufactured, consists of a knitted fabric cut to shape by shears and then sewed together.



Seamless hosiery had its beginning in America, and most of the hosiery manufactured in this country is of the seamless variety. In manufacturing seamless hosiery the labor cost is smaller than the labor cost of manufacturing full-fashioned hosiery. Practically no seamless hosiery is imported.

Hosiery is made of cotton, merino, wool, worsted, silk, artificial silk, and silk mixed with or plated upon some other yarn. Cotton is the material most largely used. For the finer grades mercerized cotton yarns are used. Merino and wool are much less used than formerly. In the last two or three years the demand for silk hosiery has greatly increased, and silk-plated and artificial-silk hosiery has been introduced.

#### HOSIERY MACHINERY.

Since 1890 about every five years has seen important changes in seamless-hosiery machines. In 1890 the machine was semiautomatic, had from 84 to 108 needles, and the cylinder and needles were stationary, the cam rings and bobbins revolving. By 1895 machines were fully automatic as to yarn changes, had up to 160 needles, and were equipped with attachments for inserting a high splicing. By 1905 still finer gauges were used, with more yarn changes. Up to this time a two-change-of-yarn machine was the one in common use. By 1907 yarn changes increased to five and six, and the machines were built with revolving cylinder and needles, the bobbins and cams remaining stationary.

The standard seamless-knitting machine of to-day has latch needles and is circular, is of the revolving-cylinder type, and has at least four yarn changes. The shaping is accomplished by the tension being loosened or tightened. Cylinder diameters run from 2½ inches to 4 inches, 3½ being commonly used. Though machines contain up to 260 needles, 220 is the one most frequently used. The machine is of high speed, being capable of from 230 to 270 revolutions a minute. Machines for knitting the finest quality seamless hosiery have up to 21½ needles to the inch and for coarse hosiery as few as 5 needles to the inch.

The full-fashioning machine to-day is a multiple-head machine of 18 or 20 sections, each section knitting one stocking. The machine is made in all gauges from 18 to 32 needles to the inch. The leg portion of the stocking is knit on a legging machine and the foot portion on a footing machine. There is now on the market a distinctive American machine, which is simpler in construction than the foreign machine.

The flat seamless knitting machine is not used in factories, but in asylums, State institutions, etc. This flat seamless machine knits a circular web. The machine is not fully automatic as to yarn changes.

The ribbing machine for seamless hosiery is latch needle and circular and is made in all diameters from 1½ inches to 5 inches. The machine makes any kind of a rib, automatically cuts the rib, and has either one or two feeds.

A departure from the present seamless principle is the spring needle, circular machine, for seamless hosiery, which has recently been introduced. This machine is intended to produce the fabric of the full-fashioned machine combined with the production of the circular machine. Many advantages are claimed for this machine.

Other American manufacturers have patented machines which perfectly fashion ladies' seamless stockings, which automatically knit an integral welt for ladies' seamless hosiery on the same machine, and one which knits a complete seamless stocking for men or women without the necessity of transferring the ribbed portion.

The first looper in the United States was imported from England by Campbell & Clute, of Cohoes, N. Y., shortly after 1868. The Germans were the first to produce the two-thread looping machine, the first American machine of this type appearing on the market in 1911. The present American looper is simple in construction, is about 18 inches in diameter, and has any number of needles to the inch, though usually from 14 to 22.

A new boarding machine has appeared which practically does away with the need of skilled boarders. It strips the hose much better than the boarder can and automatically assort the hose into dozens and half dozens as desired.

#### LOSSES FROM ANTIQUATED MACHINERY.

As hosiery machinery, especially that for making seamless hosiery, has been very greatly improved by numerous inventions in recent years, the manufacturer who uses old machines can not compete with the manufacturer using up-to-date machinery.

One who uses a two-yarn change machine can use only two different yarns in the production of a stocking, but one who uses a five or six yarn change machine can use five or six different yarns in knitting a stocking. The latter can put in cheap heavy yarn where the wear is greatest, can use fine yarns where the appearance of the stocking requires it, and in various ways can manipulate five or six different yarns so as to produce the best looking and at the same time strongest stocking. The manufacturer who uses two-change yarn machines to make a stocking as fine as this in appearance must use practically all fine yarns, and consequently he can not afford to sell it at the same price, as his yarn cost is much higher.

The first full-fashioning machines used in the United States were imported. The operation of them requires much skill, and most of the operators learned their trade in Europe. Full-fashioning machines made in the United States have a productive capacity equal to if not greater than the foreign-made machines; they are simpler in construction and do not require so much skill in their operation. Nevertheless, foreign-made machines are mostly used in the United States. Manufacturers whose factories are already equipped with foreign-made machines prefer not to introduce machines of a different type, being governed largely by the prejudices of the operators in favor of the machines to which they are accustomed.

A very important invention that many manufacturers of full-fashioned hosiery have not adopted is the boarding machine, which does the work better and more cheaply than it can be done by hand.

The use of antiquated machinery and the failure to keep machinery in proper condition are causes of waste of material and of the production of seconds, which lead to manufacturing losses.

This largely accounts for the too keen competition of which much is heard. The manufacturer who uses the old type of machine, unable to sell his coarse, heavy hosiery in competition with hosiery made on improved machines, has to cut his price, and this forces other manufacturers to cut their prices.

The average of the inventories of machinery and fixtures of the 73 establishments reporting in this investigation was \$75,608. Only 30 reported that they had purchased new machinery and fixtures during their last business year or period. Such purchases averaged \$3,173, or 4.2 per cent of the average inventory of machinery and fixtures.

#### MACHINE GAUGES AND YARN COUNTS.

The fineness of hosiery depends on the number of needles to the machine or the needle spacing. Obviously a machine with 20 needles to the inch will knit a finer stocking than a machine with 14 needles to the inch.

In describing circular machines, which are used for knitting seamless hosiery, the figures "3 $\frac{1}{4}$ -220," for instance, mean that the diameter of the needle cylinder is 3 $\frac{1}{4}$  inches and that there are 220 cuts or grooves in the cylinder, in which there are 220 needles.

In describing full-fashioning machines, the expression "24 needles to the inch," for instance, is to be taken literally. The product is knit flat, 24 threads to the inch, and later seamed to form the hose.

The cotton yarns commonly used in knitting hosiery are southern carded peeler, eastern carded peeler, eastern combed peeler, combed Egyptian, sea island, and combed sea island. Peeler is a term commonly used for describing cotton grown in the United States. Southern carded peeler is yarn spun in southern mills, and eastern carded peeler is spun in New England. Combed cotton is that from which the short fibers have been removed after they have been carded. Egyptian cotton has a longer staple than southern cotton and is straw colored. Sea-island cotton is white and is grown on the South Atlantic coast. It has a longer staple than even Egyptian cotton and is used for spinning the finest yarns.

Wool is used for hosiery to a comparatively small extent, and principally for lumbermen's and sportsmen's hosiery. Spun silk is used very extensively, reeled silk to a limited extent, and for making medium-priced hosiery artificial silk has recently become very popular.

The fineness of the yarn is indicated by its "number" or "counts." According to the method of designating counts in the United States, a No. 1 yarn would be that in which 840 yards of cotton yarn were spun into a hank weighing 1 pound; No. 2 would be a yarn in which 1,680 yards were spun into a 1-pound hank; No. 3, a yarn in which 2,520 yards were spun into a 1-pound hank, etc. In spinning worsted yarns 560 yards to the 1-pound hank is the base for No. 1.

#### MANUFACTURING PROCESSES.

In manufacturing hosiery the yarn is wound or rewound on bobbins to give a tension as nearly uniform as possible.

In knitting men's half hose or children's stockings, either seamless or full fashioned, the ribbed portion is knit on a ribbing machine and then transferred to the ordinary knitting machine, which completes the knitting process.

The top of ladies' seamless hosiery is welted. In full-fashioned hosiery the knitting machine makes what is called an integral welt. In seamless hosiery the top of the stocking is turned back and seamed.

Seamless hosiery is closed at the toe by a looping machine. Full-fashioned hosiery is closed at both heel and toe by a looping machine and seamed in other places by a sewing machine.

After the knitting and looping processes hosiery is bleached or dyed, then each hose while damp is stretched over a leg-shaped board and put in a hot box to dry. After being taken off the shaping board the hose is laid between press boards and pressed in a hydraulic press. Other operations are pairing, stamping, folding, and boxing.

#### EMPLOYEES.

In most establishments the busy season includes the months of March and April; the dullest months are July, August, and September. The total number of employees in the 73 establishments reporting was 18,494 during their busy season, of whom 1,450, or 7.85 per cent, were under 16 years of age. The average number of employees 16 years of age and over during the busy season was: Males, 69.7; females, 183.7; total, 253.4. The average in the dull season was: Males, 67.5; females, 176.8; total, 244.3, a falling off of only 9.1, or 3.59 per cent.

The establishments which made full-fashioned hosiery had the largest average number of employees, and the establishments that spin some or all of their yarn had the next largest number of employees.

The children under 16 years of age were most largely employed by the full-fashioned mills and were least employed by mills making wool and cotton hosiery, which buy their yarn.

#### WAGES AND HOURS OF LABOR.

Females constitute a large proportion of the employees in hosiery mills. Most of the labor in such mills is paid for on the piece-price basis, which is preferred by both employer and employee.

Table 18 is a summary of the average wages per hour paid in 39 hosiery mills in various sections of the United States, the average full-time working hours per week, and the average full-time weekly earnings, as shown by tables in a bulletin published by the Bureau of Labor Statistics, Department of Labor, and republished in this report. These data were obtained during an investigation by the Bureau of Labor Statistics in 1914.

TABLE 18.—AVERAGE RATES OF WAGES PER HOUR, FULL-TIME WORKING HOURS PER WEEK, AND FULL-TIME WEEKLY EARNINGS.

Occupations.	Average rate of wages per hour.	Average full-time hours per week.	Average full-time weekly earnings.
<b>MALE EMPLOYEES.</b>			
Knitters, full-fashioned hosiery.....	\$0.407	54.8	\$22.31
Knitters, footers or toppers.....	.151	56.3	8.45
Knitters, rib hosiery.....	.195	55.7	10.79
Knitters, "lady hose".....	.198	55.4	10.98
Boards.....	.228	55.3	12.33
Pressers.....	.217	55.9	12.07
Other employees.....	.181	55.5	10.04
<b>FEMALE EMPLOYEES.</b>			
Winders.....	.145	54.3	7.89
Knitters, footers or toppers.....	.150	54.9	8.24
Knitters, rib hosiery.....	.167	54.9	9.12
Knitters, "lady hose".....	.179	54.2	9.67
Toppers, full-fashioned hosiery.....	.152	54.4	8.29
Loopers.....	.154	54.8	8.42
Seamers, full-fashioned hosiery.....	.173	54.4	9.41
Welters.....	.160	55.3	8.78
Menders, fine hosiery.....	.153	54.8	8.35
Menders, rough hosiery.....	.148	55.1	8.11
Press hands.....	.126	54.0	6.80
Inspectors and folders.....	.156	55.6	8.67
Other employees.....	.123	54.8	6.44

## IMPORTS OF HOSIERY.

The imports of cotton hosiery into the United States decreased from \$6,390,921 in the fiscal year 1909 to \$2,553,914 in the fiscal year 1913. These imports in the fiscal year 1914 amounted to \$2,949,678, which was less than those in any recent fiscal year, except 1912 and 1913. They exceeded the imports of the fiscal year 1913 by \$395,764, or 15.50 per cent. This increase may be accounted for in part by the lower duties that prevailed for about nine months, from October 4, 1913, to June 30, 1914, and in part by the fact that in the fiscal year ending June 30, 1913, foreign goods were held back from entry into the United States to some extent in anticipation of lower rates of duty.

The value of cotton hosiery remaining in warehouses on September 30, 1912, was \$489,849; and on September 30, 1913, it was \$842,237.

Under the tariff act of 1913, as well as under previous acts, most of the importations are of the cheaper grades of hosiery. A large part of the importations consist of full-fashioned socks for children or infants, which are not manufactured at all in the United States.

As shown by the Census of Manufactures, the production of cotton hosiery in the United States amounted in the calendar year 1909 to \$55,909,987. The importations of such hosiery during the fiscal year 1909 amounted to \$6,390,921, were 11.43 per cent of the production in the calendar year 1909, but they have decreased to less than half what they were in that year. The importations in the fiscal year 1914, amounting to \$2,949,678, were only 5.28 per cent of the domestic production in 1909. Though no statistics regarding the production in later years are available, it is well known that many old hosiery mills have increased their output and many new hosiery mills have begun operations in the last five years. Therefore the percentage of importations of hosiery compared with the production in the United States is now smaller than 5.28.

The imports of cotton hosiery for consumption during the fiscal year 1914 amounted to \$2,949,678, and those of other cotton knit goods, except gloves, to \$341,973, the total being \$3,291,651. The amount of exports is not given separately for hosiery and other knit goods, but the exports of all cotton knit goods amounted to \$2,546,822 during the fiscal year 1914.

The reports of the Bureau of the Census do not show the production of full-fashioned hosiery separately from the production of seamless hosiery. It is known, however, that in the United States the production of seamless hosiery is very much greater than the production of full-fashioned hosiery. A trade directory shows that in 1914 there were in the United States 93 mills knitting full-fashioned hosiery and 647 mills knitting seamless hosiery.

The cost of labor in the manufacture of seamless hosiery is comparatively small, as the circular machines on which such hosiery is knit are largely automatic and are operated by girls, who each attend 4 to 16 machines. For this reason the labor cost is low and very little seamless hosiery has been imported into the United States under any tariff, including the act of 1913.

In the manufacture of full-fashioned hosiery the labor cost is higher in proportion to the total cost than in the manufacture of seamless hosiery. As labor is cheaper in Europe than in America, foreign manufacturers of full-fashioned cotton hosiery are able to compete

with the manufacturers in the United States. Most of the importations of hosiery are of full-fashioned cotton hosiery which sells at popular prices—25 and 50 cents a pair at retail—and of full-fashioned children's or infants' hose, which variety is little made in the United States. The increase in the importations under the act of 1913 has been almost entirely in this class of goods.

No tariff act has ever made a distinction between the rate of duty on full-fashioned hosiery and seamless hosiery.

Under the Payne-Aldrich Tariff Act the average ad valorem equivalent rate of duty on the cotton hosiery imported from October 1, 1912, to October 3, 1913, was 69.35 per cent. Under this act the average ad valorem equivalent rate was higher on cotton hosiery of low price than on the higher priced goods; on hosiery valued at \$1 or less per dozen pairs it was 93.56 per cent. The bulk of the imports was on the cheaper grades.

Under the Underwood-Simmons Act the average ad valorem rate of duty on the cotton hosiery imported from October 4, 1913, to September 30, 1914, was 44.6 per cent. Under this act the rates of duty are less on the low-priced grades than on the higher priced grades.

During the calendar year 1914 the imports for consumption of cotton hosiery steadily decreased by quarters. They amounted to \$1,187,700 during the quarter ending with March, \$797,799 during the quarter ending with June, \$511,385 during the quarter ending with September, and \$279,505 during the quarter ending with December. During the first quarter of the calendar year 1915 the imports were valued at \$596,316.

Nearly all of the imports of hosiery have been from Germany. Of the general imports of cotton hosiery, 97.31 per cent came from Germany in the fiscal year 1913 and 97.02 per cent in the fiscal year 1914. Most of the remainder was imported from France and England.

The importations of woolen hosiery are not separately classified, but the importations of knit woolen wearing apparel, including hosiery but excluding shawls, decreased from \$487,285 in the fiscal year 1913 to \$415,775 in the fiscal year 1914, despite the lower duties during the last nine months of the latter year.

The importations of silk hosiery are not separately classified, but the importations of knit silk wearing apparel, including hosiery, decreased from \$250,794 in the fiscal year 1913 to \$181,135 in 1914, despite lower duties during the last nine months. In recent years the fashion for silk hosiery has enormously increased the production of such goods in the United States. As shown by the Census of Manufactures, the value of the production of silk hosiery increased eighteenfold during the five years from 1904 to 1909.

It is known that the production of silk hosiery has greatly increased since 1909. Also there has been a very large increase in the production of hosiery made of artificial silk, because of the tremendously increased demand for lighter and "shiny" hosiery. Manufacturers who have changed their product to silk or artificial silk have done a profitable business, while manufacturers of cotton hosiery have found it more difficult to put their product on the market with the same margin of profit as formerly.

Under the tariff act of 1913 the rates of duty are sufficient to exclude nearly all foreign-made silk hosiery.



## EXPORTS OF HOSIERY AND KNIT GOODS.

American manufacturers of hosiery and other knit goods, relying on the home market for trade, have made but little effort to establish a market for their product in foreign countries. The exports of such goods are still very small as compared with the production in the United States, but nevertheless they have shown a substantial growth in recent years.

The statistics of exports do not classify the exports of hosiery separately from those of other knit goods, and there are no statistics showing the exports of woolen and silk hosiery, but the exports of cotton hosiery and other knit goods increased from \$1,016,325 in the fiscal year 1909 to \$2,546,822 in the fiscal year 1914, or over 150 per cent. During these five years the imports of such goods decreased by more than half.

Of such goods exported during the fiscal year 1914, amounting to \$2,546,822, the exports to England amounted to \$911,886, or over 35 per cent; to Canada, \$440,558; to Cuba, \$200,476; to Australia and Tasmania, \$142,627. Canada's purchases have more than quadrupled in the past five years. They might be larger if it were not for the preferential tariff given to Great Britain.

## IMPORTS AND EXPORTS OF HOSIERY MACHINERY.

All the machinery for knitting seamless hosiery used in this country, being peculiarly of American invention and development, is of domestic manufacture.

Most loopers are imported from Germany, and while there is a prejudice in favor of the German looper on the part of those manufacturers whose factories are equipped with them, the American loopers, wherever they have been introduced, have given satisfaction.

Most of the full-fashioning machines that are used in the United States are imported.

The only hosiery machinery that is exported from the United States are the seamless machines and a very few loopers. The American manufacturers of knitting machinery have made very little effort to establish a foreign trade, and what machinery they have sold abroad has been sold not to manufacturers directly but to jobbers. Nevertheless, export business in knitting machinery is increasing. Reports from the three largest manufacturers of seamless knitting machinery in the United States show that during the year 1913 they sold 5,979 machines in the United States and exported 1,618.

## CHAPTER I.

## CAPITAL, PROFIT, AND TURNOVER.

Data regarding the cost of production of hosiery were obtained from 73 establishments. Reports were secured from these establishments for their last business periods, usually one year. The period was for 6 months in 1 case, 11 months in 3 cases, 13 months in 1 case, 14 months in 2 cases, and 24 months in 1 case. Except in 20 cases, the business year ended December 31, 1913.

In tabulating the data the establishments were divided into seven groups according to materials used, according to product, and to some extent according to locations. These seven groups are as follows:

Group I includes 9 mills knitting full-fashioned hose, or both full-fashioned and seamless hose, made of cotton, silk, wool, and cotton and silk mixed. Of these mills, 4 made full-fashioned hose exclusively and 5 made both full-fashioned and seamless hose. Of the 9 mills, 5 were in Pennsylvania and 1 each in Massachusetts, Rhode Island, New York, and Indiana.

Group II includes 16 northern mills knitting seamless cotton hosiery (15 in Pennsylvania and 1 in New York).

Group III includes 16 southern mills knitting seamless cotton hosiery (6 in Georgia, 4 in North Carolina, 3 in Maryland, and 1 each in South Carolina, Tennessee, and Missouri).

Group IV includes 11 mills knitting seamless hosiery of silk or of cotton and silk mixtures (all in Pennsylvania).

Group V includes 9 mills knitting seamless hosiery of silk or of cotton and silk mixtures (4 in Wisconsin, 3 in Ohio, and 2 in Illinois).

Group VI includes 4 mills knitting seamless hosiery of wool, worsted, merino, and cotton mixtures (2 in Illinois and 1 each in Pennsylvania and Maryland).

Group VII includes 8 mills that spin all or some of their yarns and knit seamless hosiery of wool, wool and silk mixed, wool and cotton mixed, and cotton, silk, and wool mixed (4 in New Hampshire, and 1 each in Massachusetts, Rhode Island, Michigan, and Wisconsin).

From each establishment were secured the balance sheets for the beginning and end of its last business period. Of the 73 establishments, only 11 reported that they had borrowed capital, and 8 estimated their good will as an asset. The amounts of the capital owned and surplus and of capital borrowed at the beginning of the period are shown by groups in Table 19, being entered in this and other tables as capital employed in business, good will not being included.

TABLE 19.—CAPITAL EMPLOYED IN BUSINESS, BY GROUPS OF ESTABLISHMENTS, AT THE BEGINNING OF THEIR LAST BUSINESS YEARS.

Mills making—	Groups.	Establishments reporting capital employed in business.		
		Number.	Amount.	Average.
Full-fashioned or both full-fashioned and seamless hosiery (East and West).....	I.....	9	\$5,180,858	\$575,651
Seamless cotton hosiery (Pennsylvania and New York).....	II.....	16	1,554,777	97,155
Seamless cotton hosiery (South).....	III.....	16	2,423,413	151,463
Seamless hosiery of cotton and silk (Pennsylvania).....	IV.....	11	1,414,023	128,548
Seamless hosiery of cotton and silk (West).....	V.....	9	1,191,542	132,394
Seamless hosiery of wool and cotton mixed (East, West, and South).....	VI.....	4	834,382	208,596
Seamless hosiery and spinning yarns (East and West).....	VII.....	8	2,949,890	368,736
Total.....		73	15,548,885	212,998

As appears in the foregoing table, the average amount of capital employed in business of the 73 establishments was \$212,998 per establishment. The average of the 64 establishments making seamless hosiery (Groups II to VII, inclusive) was \$162,000, against the average of all establishments making full-fashioned hosiery (Group I), \$575,651. The average of all establishments making seamless hosiery, except those buying all or part of their yarn (Groups II to VI, inclusive), was \$132,467.

In considering the following table it should be understood that the salaries of active officers and the drawing accounts of partners were included in the cost of production before profits or losses were figured. Likewise, in the case of an individual owner of an establishment, the costs included the estimated amount he would have to pay an employee for service such as he himself performed.

It is important also to understand that before profits or losses were figured all expenses for selling were included in the cost of production.

Furthermore, depreciation was added as an expense before profits and losses were computed. It was calculated on the inventoried value of the machinery and fixtures at the uniform rate of 5 per cent for all establishments in Group I and 10 per cent for all the establishments in the other six groups. Depreciation was also figured on the balance sheet valuation of the real estate (including ground as well as buildings) at the uniform rate of 1½ per cent. Many establishments kept on their books no depreciation account and did not take it into consideration in figuring profits or losses. Of the 73 establishments that reported, only 20 had reserves for depreciation. Some establishments which showed on their books profits earned during their last business years showed losses when depreciation was added to other expenses.

#### MANUFACTURING AND FINAL PROFIT.

The percentages of manufacturing profit and final profit on net sales are shown by Tables 33 and 37, in the chapter on cost and profit, by establishments and groups. Table 20 which follows, shows by groups and combinations of groups the capital employed in the business, and the net sales, together with the manufacturing profit and final profit.

TABLE 20.—CAPITAL EMPLOYED IN BUSINESS, NET SALES, AND MANUFACTURING AND FINAL PROFIT, BY GROUPS OF ESTABLISHMENTS.

Classification.	Groups.	Estab-lish-ments.	Capital em-ployed in business.	Net sales.	Manufac-turing profit.	Final profit.
All mills reporting data.....	I to VII.....	73	\$15,548,885	\$27,010,893	\$1,797,775	\$1,527,657
Mills making—						
Seamless hosiery.....	II to VII.....	64	10,368,027	18,011,709	994,925	806,321
Seamless hosiery and buying all yarns.....	II to VI.....	56	7,418,137	13,814,768	697,994	532,281
Full-fashioned or both full-fashioned and seamless hosiery (East and West).....	I.....	9	5,180,858	8,999,184	802,850	721,336
Seamless cotton hosiery (Pennsylvania and New York).....	II.....	16	1,554,777	2,602,953	45,849	a 8,000
Seamless cotton hosiery (South).....	III.....	16	2,423,413	4,559,099	346,495	299,221
Seamless hosiery of cotton and silk (Pennsylvania).....	IV.....	11	1,414,023	2,528,796	96,845	83,590
Seamless hosiery of cotton and silk (West).....	V.....	9	1,191,542	2,665,282	174,972	134,607
Seamless hosiery of wool and cotton mixed (East, West, and South).....	VI.....	4	834,382	1,458,636	33,833	22,853
Seamless hosiery and spinning yarns (East and West).....	VII.....	8	2,949,890	4,196,942	296,931	274,051

a Loss.

The manufacturing profit shown by groups in Table 20 was found by adding the cost of goods produced, the selling expense, and the cost of finished goods purchased, and from this sum deducting any increase in the stock of goods during the year, or adding to this sum any decrease in the stock of goods. This deduction or addition gave the cost to the manufacturer of the goods sold, which figure subtracted from the net sales gave the manufacturing profit.

What is called the final profit was found by adding to the manufacturing profit the miscellaneous income from real estate, bank balances or investments outside the manufacturing business, and deducting the amount paid for interest on borrowed money. No item of expense for investments outside the manufacturing business, however, was reported.

#### PERCENTAGES OF PROFIT ON CAPITAL AND NET SALES.

The amounts shown in Table 20 are given in the form of percentages in Table 21.

TABLE 21.—PERCENTAGES OF MANUFACTURING PROFIT, AND FINAL PROFIT ON CAPITAL EMPLOYED IN BUSINESS AND ON NET SALES, BY GROUPS OF ESTABLISHMENTS.

Classification.	Groups.	Estab-lish-ments.	Per cent of manu-facturing profit.		Per cent of final profit.	
			Capital employed in business.	Net sales.	Capital employed in business.	Net sales.
All mills reporting data.....	I to VII.....	73	11.56	6.66	9.82	5.66
Mills making—						
Seamless hosiery.....	II to VII.....	64	9.60	5.52	7.78	4.48
Seamless hosiery and buying all yarns.....	II to VI.....	56	9.41	5.05	7.18	3.85
Full-fashioned or both full-fashioned and seamless hosiery (East and West).....	I.....	9	15.50	8.92	13.92	8.02
Seamless cotton hosiery (Pennsylvania and New York).....	II.....	16	2.95	1.76	0.51	0.31
Seamless cotton hosiery (South).....	III.....	16	14.30	7.60	12.35	6.56
Seamless hosiery of cotton and silk (Pennsylvania).....	IV.....	11	6.85	3.83	5.91	3.31
Seamless hosiery of cotton and silk (West).....	V.....	9	14.68	6.56	11.30	5.05
Seamless hosiery of wool and cotton mixed (East, West, and South).....	VI.....	4	4.05	2.32	2.74	1.57
Seamless hosiery and spinning yarns (East and West).....	VII.....	8	10.07	7.08	9.29	6.53

a Loss.

By Table 21 it will be seen that the profit on capital employed in business was much larger than the profit on net sales; in Group V it was more than twice as large. The percentages of manufacturing profit of all of the 73 establishments reporting, Groups I to VII, were: On capital employed in business, 11.56; on net sales, 6.66.

#### HIGHER PROFITS ON FULL-FASHIONED HOSIERY.

As practically all hosiery imported into the United States is full fashioned, it is remarkable that, as shown by Table 21, the establishments which produced full-fashioned hosiery (Group I) earned a larger percentage of profit than was earned by the mills making seamless hosiery (Groups II to VII). This is more plainly shown in Table 22.

TABLE 22.—PERCENTAGE OF MANUFACTURING PROFIT OF ESTABLISHMENTS MAKING FULL-FASHIONED AND SEAMLESS HOSIERY.

Establishments making—	Estab-lish-ments.	Percentage of manufactur-ing profits on—	
		Capital employed in business.	Net sales.
Full-fashioned or both full-fashioned and seamless hosiery (Group I).....	9	15.50	8.92
Seamless hosiery (Groups II to VII).....	64	9.60	5.52
Seamless hosiery—mills buying all yarns (Groups II to VI)....	56	9.41	5.05

Under the tariff act of 1913, as well as in all previous acts, the duty on hosiery was levied at the same rate for full-fashioned as for seamless hosiery. The labor cost on hosiery, however, whether made in the United States or abroad, is much higher on the full-fashioned than on the seamless kind. Nevertheless, it appears that the mills in which full-fashioned hosiery is manufactured earned an average percentage of profit about 60 per cent larger than the mills in which seamless hosiery is manufactured.

This is remarkable, because comparatively little seamless hosiery is manufactured outside of America and practically none is imported into the United States. Practically all of the hosiery imported is full-fashioned, and much of it is of the cheaper grades of full-fashioned cotton hosiery, which are sold in competition with the domestic production of seamless hosiery. A considerable part of the importations, however, are of full-fashioned socks for children and infants, which are but little made in the United States.

The manufacture of seamless hosiery in the United States has increased very rapidly, much more rapidly than has the manufacture of full-fashioned hosiery. This was due probably to the fact that machinery for seamless hosiery is much less expensive than full-fashioning machinery and to the fact that much less skill is required to operate the former than the latter. According to Davison's Hosiery and Knit Goods Trade Directory, there were in 1914 in the United States 647 mills making seamless hosiery and 93 making full-fashioned hosiery. The American manufacturer of seamless hosiery has had to meet competition on the cheaper grades of foreign-made full-fashioned hosiery and also increasing domestic competition, due to the large increase in the production of old mills in the United States making seamless hosiery and to the rapid establishment of new mills that manufacture such a product.

The higher percentages of profit made by the 9 mills making full-fashioned and seamless hosiery (Group I) as compared with the percentages of profit made by the 64 mills making seamless hosiery (Groups II-VII) or with the percentages of profit made by the 56 mills making seamless hosiery and buying all yarns (Group II-VI), as shown by Table 22, indicate that the establishments making full-fashioned hosiery are more efficiently managed than the establishments that make seamless hosiery. This matter is further discussed in the comment which follows Table 30, at the end of this chapter.

#### VARYING PROFITS ACCORDING TO LOCALITY.

Referring to Table 21, it will be seen that the difference between the average percentage of profit of the northern mills in Group II making seamless cotton hosiery is noticeably smaller than that of the southern mills in Group III making the same kind of product. The average per cent of manufacturing profit on net sales of mills in Group II, all but one located in Pennsylvania, was 1.76, while with mills in Group III, all in the South, it was 7.6. After a charge is made for interest and other expenses for investments outside the manufacturing business, Group II shows an average final loss of 0.31 per cent on net sales and Group III shows an average final profit of 6.56 per cent of net sales.

Comparing Group IV, composed of mills making seamless hosiery of silk or of silk and cotton mixtures, all in Pennsylvania, with Group V, composed of mills making a similar product, in Ohio, Michigan, Illinois, and Wisconsin, it will be seen that the percentages of profit of mills in Group IV were much smaller.

These differences between Group II and Group III and between Group IV and Group V may be explained in part by the fact that higher wages are paid to employees in hosiery mills in Pennsylvania than to those in southern hosiery mills. In a section of this report headed "Wages and hours of labor" appears Table 73, reproduced from a bulletin issued by the Bureau of Labor Statistics. So far as the data are given by States for the occupations of employees in hosiery mills, the statistics show that in 1914 wages were higher in Pennsylvania than the average for all States. The average rate of wages per hour in Pennsylvania and the general average for all States are given in this bulletin for the occupations shown in Table 23:

TABLE 23.—AVERAGE RATES OF WAGES PER HOUR IN HOSIERY MILLS IN PENNSYLVANIA COMPARED WITH THOSE IN ALL STATES FROM WHICH DATA WERE REPORTED, 1914.

Occupations.	Sex.	All States from which data were reported.			Pennsylvania.		
		Estab-lishments report-ing.	Em-ploy-ees reported.	Average rate of wages per hour.	Estab-lish-ments report-ing.	Em-ploy-ees reported.	Average rate of wages per hour.
Winders.....	F.....	27	464	\$0.145	10	224	\$0.150
Knitters, footers, or toppers.....	F.....	37	2,800	.150	8	1,244	.167
Knitters, "lady hose".....	M.....	17	313	.198	2	51	.214
Do.....	F.....	12	125	.179	6	63	.201
Knitters, full fashioned.....	F.....	9	507	.407	4	229	.424
Toppers, full fashioned.....	F.....	9	520	.152	4	259	.157
Seamers, full fashioned.....	F.....	9	306	.173	4	156	.193
Loopers.....	F.....	42	2,318	.154	11	822	.170
Welters.....	F.....	25	285	.160	6	70	.203
Menders, fine hosiery.....	F.....	29	309	.153	8	92	.180
Menders, rough hosiery.....	F.....	39	867	.148	9	206	.169
Boarders.....	M.....	40	1,097	.228	10	325	.283
Inspectors and folders.....	F.....	34	473	.156	7	99	.168
Other employees.....	M.....	38	2,390	.181	11	753	.184
Do.....	F.....	38	873	.123	11	1,148	.121

This table shows that the average rates of wages per hour of employees in all the specified operations were higher in Pennsylvania than the average for all States from which data were reported. As shown by Table 33, page 67, the percentage for direct labor, based on net sales, of establishments making cotton seamless hosiery, was 24.28 in Group II, composed of 15 Pennsylvania mills and 1 New York mill; and it was 18.14 in Group III, composed of 16 southern mills.

The difference between the average hourly rates of wages in Pennsylvania and those in the South accounts to some extent for the larger average profit of the southern mills. The fact that, generally speaking, the mills in both the South and West are of more recent construction and are equipped with more modern machinery than are those in Pennsylvania also accounts, to some extent, for the larger percentage of profits of the southern and western mills.

## PERCENTAGES OF PROFIT BY ESTABLISHMENTS.

Table 24 shows, by groups, the average per cent of manufacturing profit on capital employed in business and on net sales, as appears in Table 21, and also the per cent that direct labor was of the cost of materials, manufacturing, and selling, as shown by Table 39, which appears in the section of this report under "Cost and profit by establishments" (p. 83).

TABLE 24.—AVERAGE PER CENT OF MANUFACTURING PROFIT ON CAPITAL EMPLOYED IN BUSINESS AND ON NET SALES AND PER CENT THAT DIRECT LABOR WAS OF TOTAL COSTS, BY GROUPS.

Mills making—	Groups.	Per cent of manu-facturing profit on—		Per cent direct labor was of cost of materials, manu-facturing, and selling.
		Capital em-ployed in business.	Net sales.	
Full-fashioned or both full-fashioned and seamless hosiery (East and West.).....	I.....	15.50	8.92	29.35
Seamless cotton hosiery (Pennsylvania and New York).....	II.....	2.95	1.76	25.28
Seamless cotton hosiery (South).....	III.....	14.30	7.60	21.22
Seamless hosiery of cotton and silk (Pennsylvania).....	IV.....	6.85	3.83	26.96
Seamless hosiery of cotton and silk (West).....	V.....	14.68	6.56	17.76
Seamless hosiery of wool and cotton mixed (East, West, and South.).....	VI.....	4.05	2.32	15.68
Seamless hosiery and spinning yarns (East and West).....	VII.....	10.07	7.08	25.75

Table 24 shows that the mills making hosiery of wool, worsted, or merino mixed with cotton, and buying their yarns (Group VI), had an average manufacturing profit on net sales of only 2.32. Mills that make such a product have found it much more profitable to spin their own yarns. This is largely because wool costs much more than cotton, and mills that spin their own yarns of wool and cotton mixed can vary the per cent of wool used according to the fluctuations of the wool market. This is illustrated by comparing Group VI with Group VII. The mills in both of these groups make the same kind of product, but the mills in Group VI buy all their yarns, and the mills in Group VII spin their wool, worsted, and merino yarns. The average per cent of manufacturing profit on net sales was 2.32 in Group VI, as compared with 7.08 in Group VII.

An examination of Table 24 shows that the profit on capital employed in business was much larger than it was on net sales. Contrasting groups of mills making the same kind of product, the following percentages of manufacturing profit on capital employed in business are shown:

Mills making full-fashioned hosiery of all materials: Group I, 15.5 per cent.

Mills making seamless hosiery of cotton: Group II (all but one in Pennsylvania), 2.95 per cent; Group III (all but one in the South), 14.3 per cent.

Mills making seamless hosiery of silk and cotton: Group IV (all in Pennsylvania), 6.85 per cent; Group V (all in Middle Western States), 14.68 per cent.



Mills making seamless hosiery of wool and cotton mixed: Group VI (mills buying yarns), 4.05 per cent; Group VII (mills spinning yarns), 10.07 per cent.

The reports received during this investigation show great differences in the percentages of profit earned by hosiery establishments. Table 25 shows for each establishment, as well as for each group, the manufacturing and final profit based on capital, etc., and on net sales.

TABLE 25.—PERCENTAGE OF MANUFACTURING PROFIT AND FINAL PROFIT, BASED ON CAPITAL EMPLOYED IN BUSINESS AND ON NET SALES, BY ESTABLISHMENTS AND GROUPS OF ESTABLISHMENTS.

[For definition of terms "manufacturing profit" and "final profit" see p. 51.]

Establishments and groups.	Per cent of manufacturing profit on—		Per cent of final profit on—	
	Capital employed in business.	Net sales.	Capital employed in business.	Net sales.
<b>Mills making full-fashioned or both full-fashioned and seamless hosiery (East and West), Group I:</b>				
Establishment No. 1 <sup>a</sup>	6.96	12.83	5.63	10.38
Establishment No. 2	38.24	11.17	37.09	10.84
Establishment No. 3	5.83	3.79	5.83	3.79
Establishment No. 4	5.03	2.44	4.11	2.00
Establishment No. 5	<sup>b</sup> 7.44	<sup>b</sup> 4.69	<sup>b</sup> 5.73	<sup>b</sup> 5.73
Establishment No. 6	29.19	13.32	27.30	12.46
Establishment No. 7	28.79	7.27	25.08	6.33
Establishment No. 8	23.08	16.75	23.08	16.75
Establishment No. 9 <sup>c</sup>	9.75	6.42	6.83	4.50
Average.....	15.50	8.92	13.92	8.02
<b>Mills making seamless cotton hosiery (Pennsylvania and New York), Group II:</b>				
Establishment No. 10	15.40	7.80	4.74	2.42
Establishment No. 11	<sup>b</sup> 1.04	<sup>b</sup> 1.04	<sup>b</sup> .99	<sup>b</sup> 1.04
Establishment No. 12	4.46	4.16	2.36	2.21
Establishment No. 13	3.77	3.30	3.77	3.30
Establishment No. 14	22.49	4.52	21.91	4.40
Establishment No. 15	<sup>b</sup> .17	<sup>b</sup> .11	<sup>b</sup> 1.13	<sup>b</sup> .79
Establishment No. 16	1.43	1.08	1.13	.86
Establishment No. 17 <sup>d</sup>	<sup>b</sup> 18.61	<sup>b</sup> 5.35	<sup>b</sup> 19.34	<sup>b</sup> 5.56
Establishment No. 18	13.96	3.10	4.17	.93
Establishment No. 19	32.26	11.08	29.24	10.04
Establishment No. 20	21.93	9.86	21.93	9.86
Establishment No. 21	<sup>b</sup> 10.03	<sup>b</sup> 5.60	<sup>b</sup> 11.54	<sup>b</sup> 6.45
Establishment No. 22	3.67	2.27	3.35	2.07
Establishment No. 23	<sup>b</sup> 3.70	<sup>b</sup> 2.47	<sup>b</sup> 4.44	<sup>b</sup> 2.97
Establishment No. 24	3.22	1.63	<sup>b</sup> 1.97	<sup>b</sup> 1.00
Establishment No. 25	1.32	1.11	<sup>b</sup> 3.89	<sup>b</sup> 3.27
Average.....	2.95	1.76	<sup>b</sup> .51	<sup>b</sup> .31
<b>Mills making seamless cotton hosiery (South), Group III:</b>				
Establishment No. 26	<sup>b</sup> 1.53	<sup>b</sup> 1.99	<sup>b</sup> 1.53	<sup>b</sup> 1.99
Establishment No. 27 <sup>d</sup>	14.04	7.83	7.57	4.22
Establishment No. 28	6.08	2.31	.15	.06
Establishment No. 29	<sup>b</sup> 5.90	<sup>b</sup> 2.72	<sup>b</sup> 5.90	<sup>b</sup> 2.72
Establishment No. 30	13.54	8.76	10.59	6.85
Establishment No. 31	16.64	8.45	16.64	8.45
Establishment No. 32	.45	.60	<sup>b</sup> 1.74	<sup>b</sup> 2.70
Establishment No. 33	22.90	13.23	22.90	13.23
Establishment No. 34	<sup>b</sup> 20.71	<sup>b</sup> .28	<sup>b</sup> 25.97	<sup>b</sup> 10.38
Establishment No. 35	14.35	9.78	10.64	7.25
Establishment No. 36	<sup>b</sup> 5.91	<sup>b</sup> 4.83	<sup>b</sup> 6.79	<sup>b</sup> 5.54
Establishment No. 37 <sup>e</sup>	14.19	9.34	12.82	8.35
Establishment No. 38	10.38	4.94	7.76	3.69
Establishment No. 39 <sup>f</sup>	85.55	19.91	85.55	19.91
Establishment No. 40	11.65	5.78	9.79	4.86
Establishment No. 41	20.12	9.30	18.19	8.40
Average.....	14.30	7.60	12.35	6.56

<sup>a</sup> Reports for 6 months.  
<sup>b</sup> Loss.

<sup>c</sup> Reports for 13 months.  
<sup>d</sup> Reports for 14 months.

<sup>e</sup> Reports for 11 months.  
<sup>f</sup> Reports for 2 years.

TABLE 25.—PERCENTAGE OF MANUFACTURING PROFIT AND FINAL PROFIT, BASED ON CAPITAL EMPLOYED IN BUSINESS AND ON NET SALES BY ESTABLISHMENTS AND GROUPS OF ESTABLISHMENTS—Continued.

Establishments and groups.	Per cent of manufacturing profit on—		Per cent of final profit on—	
	Capital employed in business.	Net sales.	Capital employed in business.	Net sales.
<b>Mills making seamless hosiery of cotton and silk (Pennsylvania), Group IV:</b>				
Establishment No. 42	16.95	15.12	16.95	15.12
Establishment No. 43	.23	.25	<sup>a</sup> .98	<sup>a</sup> 1.07
Establishment No. 44	<sup>a</sup> .90	<sup>a</sup> 1.00	<sup>a</sup> 2.94	<sup>a</sup> 3.28
Establishment No. 45	5.20	5.85	4.56	5.12
Establishment No. 46	9.40	7.67	8.60	7.02
Establishment No. 47	4.03	2.34	3.40	1.97
Establishment No. 48	13.37	6.45	12.81	6.18
Establishment No. 49	3.22	2.16	2.76	1.85
Establishment No. 50	7.28	4.31	6.88	4.08
Establishment No. 51	30.08	11.19	28.81	10.72
Establishment No. 52	<sup>a</sup> 6.98	<sup>a</sup> 3.21	<sup>a</sup> 8.45	<sup>a</sup> 3.89
Average.....	6.85	3.83	5.91	3.31
<b>Mills making seamless hosiery of cotton and silk (West), Group V:</b>				
Establishment No. 53	<sup>a</sup> 12.03	<sup>a</sup> 13.10	<sup>a</sup> 12.03	<sup>a</sup> 13.10
Establishment No. 54	<sup>a</sup> 2.53	<sup>a</sup> 4.54	<sup>a</sup> 4.69	<sup>a</sup> 8.43
Establishment No. 55	11.49	6.33	9.79	5.40
Establishment No. 56	6.53	5.10	4.50	3.51
Establishment No. 57	5.43	2.48	<sup>a</sup> 4.77	<sup>a</sup> 2.17
Establishment No. 58	16.91	4.72	16.91	4.72
Establishment No. 59	7.62	5.81	4.02	3.06
Establishment No. 60	<sup>a</sup> 4.08	<sup>a</sup> 2.28	<sup>a</sup> 6.60	<sup>a</sup> 3.69
Establishment No. 61	29.97	10.11	26.13	8.82
Average.....	14.68	6.56	11.30	5.05
<b>Mills making seamless hosiery of wool and cotton mixed (East, West, and South), Group VI:</b>				
Establishment No. 62	7.82	6.96	7.82	6.86
Establishment No. 63	6.79	4.17	5.21	3.20
Establishment No. 64	9.72	2.21	2.12	.48
Establishment No. 65	1.67	1.30	1.67	1.30
Average.....	4.05	2.32	2.74	1.57
<b>Mills making seamless hosiery and spinning yarns (East and West), Group VII:</b>				
Establishment No. 66	<sup>a</sup> 7.11	<sup>a</sup> 2.86	<sup>a</sup> 7.11	<sup>a</sup> 2.86
Establishment No. 67	4.08	3.20	2.81	5.64
Establishment No. 68	<sup>a</sup> 1.73	<sup>a</sup> 1.12	<sup>a</sup> 5.20	<sup>a</sup> 3.37
Establishment No. 69	4.26	2.64	.68	.42
Establishment No. 70	<sup>a</sup> 8.23	<sup>a</sup> 9.58	<sup>a</sup> 11.20	<sup>a</sup> 13.04
Establishment No. 71	18.34	9.59	17.37	9.09
Establishment No. 72	19.60	12.69	19.15	12.40
Establishment No. 73	6.53	4.80	6.48	4.75
Average.....	10.07	7.08	9.29	6.53

<sup>a</sup> Loss.

The foregoing table shows that of the 73 establishments from which data were secured, 18 had manufacturing losses and 23 had final losses. The item of interest on borrowed money accounted principally for the difference between manufacturing losses and final losses.

The table shows also that of the 73 establishments reporting, 27 earned during their last business periods 10 per cent or more of profit on their capital employed in business, the highest per cent being 85.55 (establishment No. 39) in two years, or at the rate of 42.78 per cent per year.

Considering manufacturing and final profits and losses on net sales, it is seen that the greatest percentage of profit of any establishment was 19.91 (establishment No. 39) and the largest percentage of loss was 13.10 (No. 53). Thirty-one had a manufacturing profit of over 5 per cent on net sales.



The fact that an establishment made a very small profit or had a loss may have been due to several causes, such as (a) poor factory management, (b) poor cost-finding system, (c) poor selling methods, (d) too little care in extending credits, (e) lack of sufficient capital, (f) too much withdrawn from the business by the owner, partners, or officers.

#### PROFITS EARNED BY LARGE AND SMALL ESTABLISHMENTS.

There is a difference of opinion as to whether large or small factories are more efficiently conducted with reference to economy of production. In the larger factories efficiency systems have effected certain economies, but in some of these factories the overhead expenses are disproportionately large. The establishments in each group shown in the preceding table were arranged in the order of the amounts of net sales, the establishment with the smallest sales first and the one with the largest last. An examination of the table shows that there were no decided differences in the percentages of profit between the smaller and the larger establishments in each group.

#### PROFITS OF FULL-FASHIONING MILLS.

Group I is composed of 9 mills that make full-fashioned hosiery. Full-fashioned hosiery exclusively is made by 4 of these and both full-fashioned and seamless hosiery by 5. For purposes of comparison, the data for this group in the preceding table are divided as shown in Tables 26 and 27.

TABLE 26.—PER CENT OF MANUFACTURING PROFIT AND FINAL PROFIT, BY ESTABLISHMENTS MAKING FULL-FASHIONED HOSIERY EXCLUSIVELY.

Establishment No.	Per cent of manufacturing profit on—		Per cent of final profit on—	
	Capital employed in business.	Net sales.	Capital employed in business.	Net sales.
2.....	38.24	11.17	37.09	10.84
3.....	5.83	3.79	5.83	3.79
6.....	29.19	13.32	27.30	12.46
7.....	28.79	7.27	25.08	6.33
Average.....	24.50	8.54	22.33	7.79

Table 26 includes 4 establishments making full-fashioned hosiery exclusively, and the product of 3 of these was made entirely of silk and the product of 1 was made of silk or cotton, or of both silk and cotton.

TABLE 27.—PER CENT OF MANUFACTURING PROFIT AND FINAL PROFIT, BY ESTABLISHMENTS MAKING BOTH FULL-FASHIONED AND SEAMLESS HOSIERY.

Establishment No.	Per cent of manufacturing profit on—		Per cent of final profit on—	
	Capital employed in business.	Net sales.	Capital employed in business.	Net sales.
1 <sup>a</sup> .....	6.96	12.83	5.63	10.33
4.....	5.03	2.44	4.11	2.00
5.....	<sup>b</sup> 7.44	<sup>b</sup> 4.69	<sup>b</sup> 9.37	<sup>b</sup> 5.78
8.....	23.08	16.75	23.08	16.75
9 <sup>c</sup> .....	9.75	6.42	6.83	4.50
Average.....	13.23	9.11	11.80	8.13

<sup>a</sup> Report for 6 months.

<sup>b</sup> Loss.

<sup>c</sup> Report for 13 months.

Table 27 includes 5 establishments making both full-fashioned and seamless hosiery, and the product of 4 of them was made of silk or cotton, or of both silk and cotton, and the product of 1 was made of cotton or wool, or of both cotton and wool.

The average percentage of manufacturing profit on net sales was slightly smaller with the establishments making full-fashioned hosiery exclusively than with establishments making both full-fashioned and seamless hosiery, but the former class of establishments had a much higher percentage of profit on their investment. These facts appear in the following condensed Table 28:

TABLE 28.—PERCENTAGES OF PROFIT OF ESTABLISHMENTS MAKING FULL-FASHIONED HOSIERY COMPARED WITH THOSE OF ESTABLISHMENTS MAKING BOTH FULL-FASHIONED AND SEAMLESS HOSIERY.

Establishments making—	Establishments.	Average percentage of manufacturing profit on—	
		Capital employed in business.	Net sales.
Full-fashioned hosiery exclusively.....	4	24.50	8.54
Both full-fashioned and seamless hosiery.....	5	13.23	9.11

#### TURNOVER OF CAPITAL.

An examination of Table 25 shows that while some establishments made small percentages of profit on their net sales they made large percentages of profit on the capital employed in their business. This was due to the fact that in some establishments the capital was turned over more frequently than in others. The same table also shows large differences between the groups with regard to capital employed in the business as compared with net sales. These differences are shown more conspicuously in Table 29.

TABLE 29.—CAPITAL TURNOVER OR RATIO OF NET SALES TO CAPITAL EMPLOYED IN THE BUSINESS, BY GROUPS OF ESTABLISHMENTS.

Classification.	Groups.	Establishments.	Capital employed in business.	Net sales.	Ratio of net sales to capital employed.
All mills reporting data.....	I to VII.....	73	\$15,548,885	\$27,010,893	1.74
Mills making—					
Seamless hosiery.....	II to VII.....	64	10,368,027	18,011,709	1.74
Seamless hosiery and buying all yarns....	II to VI.....	56	7,418,137	13,814,768	1.86
Full-fashioned or both full-fashioned and seamless hosiery (East and West).....	I.....	9	5,180,858	8,999,184	1.74
Seamless cotton hosiery (Pennsylvania and New York).....	II.....	16	1,554,777	2,602,953	1.67
Seamless cotton hosiery (South).....	III.....	16	2,423,413	4,559,099	1.88
Seamless hosiery of cotton and silk (Pennsylvania).....	IV.....	11	1,414,023	2,528,796	1.79
Seamless hosiery of cotton and silk (West).....	V.....	9	1,191,542	2,065,282	2.24
Seamless hosiery of wool and cotton mixed (East, West, and South).....	VI.....	4	834,382	1,458,636	1.75
Seamless hosiery and spinning yarns (East and West).....	VII.....	8	2,949,890	4,196,942	1.46

By this table it is seen that the turnover of capital was much greater in some groups than in others. The ratio that the average net sales were to the capital employed in business varied from 1.46 in Group VII to 2.24 in Group V, the average for all establishments (Groups I to VII) being 1.74.

#### PROFITS OF MILLS USING DIFFERENT MATERIALS.

Hosiery is made of cotton by all establishments in Groups II and III, of cotton and silk by all establishments in Groups IV and V, and of cotton and wool by all establishments in Group VI. The establishments making full-fashioned hosiery (Group I) and the establishments making seamless hosiery and spinning yarn (Group VII) use different materials. The percentages of profit of establishments, arranged according of the materials used, are shown in Table 30.

TABLE 30.—PERCENTAGE OF PROFIT OF ESTABLISHMENTS CLASSIFIED BY THE MATERIALS THAT THEY USED.

Product made of—	Estab-lish-ments.	Percentage of man-ufacturing profit based on—		Percentage of final profit based on—	
		Capital em-ployed in business.	Net sales.	Capital em-ployed in business.	Net sales.
Cotton:					
Group II.—Seamless.....	16	2.95	1.76	a 0.51	a 0.31
Group III.—Seamless.....	16	14.30	7.60	12.35	6.56
Total.....	32	9.86	5.48	7.33	4.07
Wool: Group VII.—Seamless, mills spinning yarn...	2	3.05	4.46	1.89	2.77
Cotton and wool:					
Group I.—Full fashioned and seamless.....	1	5.03	2.44	4.11	2.00
Group VI.—Seamless.....	4	4.05	2.32	2.74	1.57
Group VII.—Seamless, mills spinning yarn.....	2	a 5.99	a 5.46	a 9.13	a 8.33
Total.....	7	2.22	1.31	.58	.35
Silk: Group I.—Full fashioned.....	2	31.04	12.71	29.30	12.00
Cotton and silk:					
Group I.—Full fashioned.....	2	20.73	6.66	18.32	5.89
Group I.—Full fashioned and seamless.....	4	13.77	9.75	12.31	8.72
Group IV.—Seamless.....	11	6.85	3.83	5.91	3.31
Group V.—Seamless.....	9	14.68	6.56	11.30	5.05
Total.....	26	13.20	7.41	11.43	6.42
Cotton, silk, and wool: Group VII.—Seamless, mills spinning yarn.....	4	12.51	8.20	12.04	7.89
All establishments.....	73	11.56	6.66	9.82	5.66

a Loss.

In the order of highest percentages of manufacturing profit, based on net sales, the average percentages of establishments using different materials were as follows: Silk, 12.71; cotton, silk, and wool, 8.20; cotton and silk, 7.41; cotton, 5.48; wool, 4.46; cotton and wool, 1.31; all materials, 6.66.

#### TARIFF RATES ON HOSIERY OF DIFFERENT MATERIALS.

As shown by Table 21, the average percentage of profit of the 9 establishments in Group I was considerably higher than the average in any other group. This can not be explained on the ground of the difference in duty on hosiery made of different materials, because the manufacturers of hosiery made of cotton, or of wool, or of cotton and wool mixed, received the benefit of a higher rate of duty than did the manufacturers of hosiery made of silk, or of which silk was the component material of chief value.

Most of the reports from hosiery establishments were for the year ending December 31, 1913. The new tariff on silk and cotton goods went into effect October 4, 1913; the new tariff on woolen goods January 1, 1914. Under no tariff has there been a different rate of duty on full-fashioned hosiery from the rate on seamless hosiery.

On articles made of silk, or of which silk was the component material of chief value, the duty under the old tariff was 60 per cent ad valorem; under the new tariff it is 50 per cent.

On hosiery made of cotton the duty was and is variable according to grades. Under the old tariff, during the period from October 1, 1912, to June 30, 1913, the imports of cotton hosiery for consumption amounted to \$1,877,809.24, on which \$1,302,277.73 duty was collected, which was equivalent to an average ad valorem rate of 69.35 per cent, or 9.35 per cent more than the ad valorem rate of duty on knitted articles made of silk, or of which silk was the component material of chief value, under the old tariff, which was 60 per cent. Under the new tariff, during the period from October 4, 1913, to June 30, 1914, the imports of cotton hosiery for consumption amounted to \$2,561,301.47, on which \$1,142,404.53 duty was collected, which was equivalent to an average rate of 44.60 ad valorem, or 5.40 per cent less than the ad valorem rate of duty on knitted articles made of silk, or of which silk was the component material of chief value, under the new tariff, which is 50 per cent.

During the whole calendar year 1913 woolen goods were subject to the rates of duty of the old tariff. Under the old tariff woolen hosiery was not separately classified, but the rate of duty on knitted articles of wearing apparel composed wholly or in part of wool was 44 cents per pound plus 60 per cent ad valorem. During the calendar year 1913 the imports of such wearing apparel, except shawls, amounted to \$373,903.41, on which \$341,331.87 duty was collected, which was equivalent to an average ad valorem rate of 91.29, or 31.29 more than the ad valorem rate of duty on knitted articles made of silk, or of which silk was the component material of chief value, under the old tariff, which was 60 per cent.

From the foregoing the following facts appear:

1. By the 9 establishments that manufactured full-fashioned hosiery (Group I), the product of 8 of which was hosiery of silk, or partly of silk, a higher percentage of manufacturing profit was earned on net sales than by the establishments in any of the groups that manufactured seamless hosiery of materials other than silk.

2. From January 1, 1913, to October 4, 1913, the establishments that manufactured seamless cotton hosiery had the advantage of 9.35 per cent more duty than did the establishments that manufactured hosiery of silk, or of which silk was the component material of chief value.

3. During the whole of the calendar year 1913, the establishments that manufactured hosiery composed wholly or in part of wool (all of which manufactured seamless hosiery, except one establishment) had the advantage of 31.29 per cent more duty than did the establishments that manufactured hosiery of silk, or of which silk was the component material of chief value.

4. The higher percentage of profit earned by the 9 establishments that manufactured full-fashioned hosiery (Group I), of which 8 used silk, was not on account of a higher protection under the tariff.

5. It is also true that practically all of the imports of hosiery have been and are of full-fashioned hosiery.

6. These facts indicate that in the establishments reporting, those which manufactured full-fashioned hosiery had more efficient factory organization or better selling methods than did the establishments which manufactured seamless hosiery.

Further details in regard to profit will be found in this report under the heads of "Cost and profit by establishments and groups," "Cost and profit by specified units," and "Selling methods."

## CHAPTER II.

### COST AND PROFIT BY ESTABLISHMENTS.

The schedules used for the collection of data show the various items of the cost of production. The principal divisions of costs were for raw material, direct labor, indirect labor, factory expense, administrative expense, and selling expense. Each of the divisions, except that for materials, was subdivided into specified items.

The salaries of active partners or officers, or the estimated amounts that individual owners would have paid for services which they themselves performed, were entered under indirect labor, administrative expense, or selling expense, according to the character of the services rendered.

In presenting the data secured from the 73 establishments the actual amounts of their net sales and of their expenses for a year are not shown by individual establishments, because by such figures some establishments might possibly be identified, and the object was to avoid disclosing any facts that were given in confidence. The net sales, the items of cost, and the profit are shown by percentages, according to establishments, and by both averages and percentages, according to groups.

### COST AND PROFIT BASED ON NET SALES.

The data derived from the establishment schedules, reduced to averages and percentages, are shown in a series of tables which follow. Table 31 shows, by groups of establishments, the average net sales, the items of average cost, and the average profit or loss on net sales per establishment.

TABLE 31.—AVERAGE COST OF GOODS, BY SPECIFIED ITEMS OF EXPENSE, AND PROFIT OR LOSS, BY GROUPS AND BY COMBINATION OF GROUPS OF ESTABLISHMENTS.

Items.	All establishments reporting data, Groups I to VII.	Seamless, Groups II to VII.	Seamless, mule spinning yarns, Groups II to VI.	Full-fashioned both full-fashioned and seamless (East and West), Group I.	Seamless cotton (Pennsylvania and New York), Group II.	Seamless cotton (South), Group III.	Seamless cotton and silk (Pennsylvania and South), Group IV.	Seamless wool and cotton (East, West, and South), Group V.	Seamless mule spinning yarns (East and West), Group VI.	Seamless mule spinning yarns (East and West), Group VII.
Number of establishments.....	73	64	56	9	16	16	11	9	4	8
Net sales.....	\$370,012	\$281,433	\$246,692	\$999,909	\$162,685	\$284,944	\$229,890	\$296,142	\$384,659	\$324,618
Raw material.....	172,930	138,364	127,185	415,727	82,775	142,466	118,940	133,198	252,946	216,620
Direct labor:										
Wages.....	80,550	58,576	50,174	236,808	39,225	51,676	61,387	50,485	56,427	117,388
Paid contractors.....	430	138	158	2,508	268	.....	414	.....	.....	.....
Total.....	80,980	58,714	50,332	239,316	39,493	51,676	61,801	50,485	56,427	117,388
Indirect labor:										
Salaries of officials.....	2,539	2,066	2,094	5,893	1,946	1,484	2,980	2,608	1,625	2,601
Wages.....	11,801	9,223	6,998	30,134	4,574	8,615	9,233	8,865	4,380	24,800
Total.....	14,354	11,319	9,022	35,937	6,520	10,099	11,823	9,473	6,005	27,401
Factory expense:										
Tower, heat, light.....	4,657	4,125	2,999	8,441	2,080	3,980	2,401	4,551	3,788	12,006
Repairs.....	2,372	1,880	1,657	5,877	1,477	1,304	1,684	2,569	1,662	3,488
Depreciation.....	7,191	5,619	5,529	18,367	4,590	6,711	4,662	4,739	8,482	6,251
Fire insurance.....	645	547	537	1,336	529	462	550	814	624	624
Other factory expense.....	3,033	2,319	1,589	8,111	1,126	2,327	1,432	942	2,380	7,427
Total.....	17,893	14,490	12,311	42,132	9,802	14,124	10,729	13,340	17,126	29,746
Administrative expense:										
Salaries of officials.....	2,133	2,680	2,661	6,286	1,714	3,004	3,968	2,621	3,275	2,676
Salaries of office force.....	2,935	2,688	2,422	4,695	1,321	2,483	2,120	4,679	2,343	4,546
Rent, general office.....	92	2	3	.....	.....	.....	.....	.....	.....	.....
Office expenses.....	971	852	779	1,819	457	257	377	2,089	512	1,774
Insurance, except fire.....	233	178	168	468	28	202	111	304	288	32
Collection expense.....	215	188	202	408	74	.....	553	304	288	32
Bad debts.....	1,003	1,040	892	736	551	1,170	633	1,609	108	2,074

Taxes.....	1,074	822	560	2,884	253	422	224	1,362	1,498	2,653
Other administrative expense.....	912	704	631	2,397	323	1,145	461	335	897	1,210
Total.....	10,478	9,158	8,289	19,869	4,751	8,692	8,853	12,828	9,071	15,234
Selling expense:										
Salaries of officials.....	1,276	1,067	977	2,764	1,064	338	1,456	1,761	100	1,701
Commission and expense.....	15,668	13,069	9,897	35,537	7,422	8,413	9,453	19,744	7,456	3,483
Age, show and shipping rooms.....	1,063	1,165	1,023	3,159	681	213	9,675	2,456	1,184	2,448
Rent, show and shipping rooms.....	191	195	225	519	108	781	208	261	104	253
Fire insurance.....	183	185	175	251	108	188	1,010	1,496	2,568	2,568
Packing cases, etc.....	1,465	1,212	1,018	3,512	1,220	164	1,454	4,673	5,913	897
Cartage, freight outward.....	2,502	2,450	2,659	2,872	937	3,262	2,579	25,849	100	3,588
Advertising.....	6,014	5,751	6,007	7,884	835	2,165	1,181	7,282	863	2,781
Other selling expense.....	1,512	1,717	1,565	2,487	112	1,051	129	.....	.....	.....
Total.....	30,774	26,739	23,477	59,471	12,879	16,396	17,066	64,985	18,424	49,574
Total manufacturing and selling.....	327,414	285,784	230,616	815,452	156,220	243,453	229,212	294,309	359,899	455,963
Cost of goods purchased.....	24,055	11,899	10,757	110,500	7,416	26,645	400	5,890	19,862	19,862
Deduct increase in stock of goods.....	6,084	4,796	7,145	15,248	3,517	6,810	8,526	13,498	3,698	11,647
Add decrease in stock of goods.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Cost of goods sold.....	345,385	265,887	234,228	910,704	159,819	263,288	221,086	276,701	356,201	487,502
Manufacturing profit.....	24,627	15,546	12,464	89,205	2,896	21,656	8,804	19,441	8,488	37,116
Miscellaneous income (add to profit, deduct from loss).....	86	98	113	384	384	.....	.....	.....	.....	.....
Interest paid on current loans (deduct from profit, add to loss).....	3,786	3,045	3,072	9,057	3,760	2,955	1,205	4,485	2,745	2,860
Final profit.....	20,927	12,599	9,505	80,148	500	18,701	7,599	14,956	5,713	34,256

a Loss.



The average net sales of all the 73 establishments that reported were \$370,012; the average cost of goods sold, \$345,385; the average manufacturing profit on net sales, \$24,627; and the average final profit on net sales, \$20,927. These items for all establishments and for the various groups are shown in Table 32.

TABLE 32.—NET SALES, COST OF GOODS SOLD, AND MANUFACTURING AND FINAL PROFIT, BY GROUPS AND COMBINATIONS OF GROUPS OF ESTABLISHMENTS.

[For definition of terms "manufacturing profit" and "final profit" see p. 51.]

Classification.	Groups.	Estab- lishments.	Average per establishment.			
			Net sales.	Cost of goods sold.	Manufac- turing profit.	Final profit.
All mills reporting data.....	I to VII..	73	\$370,012	\$345,385	\$24,627	\$20,927
Mills making—						
Seamless hosiery.....	II to VII.	64	281,433	265,887	15,546	12,569
Seamless hosiery and buying all yarns.....	II to VI..	56	246,692	234,228	12,464	9,505
Full-fashioned, or both full-fash- ioned and seamless hosiery (East and West).....	I.....	9	999,909	910,704	89,205	80,148
Seamless cotton hosiery (Pennsyl- vania and New York).....	II.....	16	162,685	150,819	2,866	a 500
Seamless cotton hosiery (South).....	III.....	16	284,944	263,288	21,656	18,701
Seamless hosiery of cotton and silk (Pennsylvania).....	IV.....	11	229,890	221,086	8,804	7,599
Seamless hosiery of cotton and silk (West).....	V.....	9	296,142	270,701	19,441	14,956
Seamless hosiery of wool and cotton mixed (East, West, and South).....	VI.....	4	364,659	356,201	8,458	5,713
Seamless hosiery and spinning yarns (East and West).....	VII.....	8	524,618	487,802	37,116	34,256

a Loss.

As will be observed from this table, the average amounts of net sales and profits per establishment were very much larger in Group I than in any other group. In this group, composed of mills making full-fashioned or both full-fashioned and seamless hosiery, the average net sales approximated a million dollars. The group with the next largest average amounts of net sales and profits was Group VII, composed of mills making seamless hosiery, mostly of wool and cotton mixtures, and spinning all or some of their yarns. The smallest average net sales were in Group II, composed of 15 mills in Pennsylvania and 1 in New York. This group also had the smallest average manufacturing profit, and had an average final loss, accounted for by an extraordinarily large interest account.<sup>a</sup>

For the purposes of comparison, the percentages of the items of cost and the percentages of profit are shown in the condensed tables which follow. Table 33 shows, by groups and combinations of groups of establishments, percentages based on the averages of net sales, cost, and profit.

<sup>a</sup> See per cent for interest in this group shown in Table 33.

TABLE 33.—PERCENTAGES OF AVERAGE SPECIFIED ITEMS OF EXPENSE AND PROFIT OR LOSS, BASED ON NET SALES, BY GROUPS AND BY COMBINATIONS OF GROUPS OF ESTABLISHMENTS.

Items.	All estab- lish- ments report- ing data. Groups I to VII.	Seamless, cotton and silk Groups II to VII.	Seamless mills buying all yarns, Groups II to VI.	Full-fash- ioned or both full- fashioned and seam- less (East and West), Group I.	Seamless cotton (Pennsyl- vania and New York), Group II.	Seamless cotton (South), Group III.	Seamless cotton and silk (Pennsyl- vania and West), Group IV.	Seamless cotton and silk (West), Group V.	Seamless wool and cotton spinning (East, West, and South), Group VI.	Seamless wool and cotton spinning (East, West, and South), Group VII.
Number of establishments.....	73	64	56	9	16	16	11	9	4	8
Net sales.....	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00
Raw material.....	46.74	49.17	51.56	41.88	50.88	50.00	51.74	44.98	69.33	41.29
Direct labor:										
Wages.....	21.77	20.81	20.34	23.08	24.11	18.14	26.70	17.05	13.47	22.38
Paid contractors.....	.12	.05	.06	.25	.17	.....	.18	.....	.....	.....
Total.....	21.89	20.86	20.40	23.33	24.28	18.14	26.88	17.05	13.47	22.38
Indirect labor:										
Salaries of officials.....	.69	.74	.82	.58	1.20	.52	1.12	.88	.45	.49
Wages.....	3.19	3.28	2.84	3.01	2.81	3.02	4.02	2.32	1.20	4.73
Total.....	3.88	4.02	3.66	3.59	4.01	3.54	5.14	3.20	1.65	5.22
Factory expense:										
Power, heat, light.....	1.26	1.47	1.22	.64	1.28	1.14	1.05	1.53	1.04	2.29
Repairs.....	.64	.67	.67	.59	.91	.46	.73	.87	.46	.65
Depreciation.....	1.94	2.00	2.24	1.84	2.82	2.38	2.03	1.60	2.33	1.19
Office expense.....	.83	.89	.82	.73	.32	.16	.24	.18	.22	.12
Other factory expense.....	.52	.81	.04	.81	.09	.82	.62	.32	.65	1.42
Total.....	4.84	5.15	4.99	4.21	6.02	4.96	4.67	4.50	4.70	5.67
Administrative expense:										
Salaries of officials.....	.85	.96	1.09	.63	1.05	1.06	1.74	.68	.90	.51
Wages.....	.79	.86	.98	.81	.81	(e) .87	.92	1.58	.64	.86
Rent, general office.....	(a) .26	.30	.29	.18	.30	(e) .09	.32	.60	.14	.34
Office expense.....	.06	.06	.07	.07	.04	.07	.05	.16	.03	.04
Insurance, except fire.....	.06	.07	.08	.04	.04	.....	.24	.10	.08	.02
Collection expense.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....

a Less than one one-hundredth of 1 per cent.

TABLE 33.—PERCENTAGES OF AVERAGE SPECIFIED ITEMS OF EXPENSE AND PROFIT OR LOSS, BASED ON NET SALES, BY GROUPS AND BY COMBINATIONS OF GROUPS OF ESTABLISHMENTS.—Continued.

Items.	All establishments reporting data, Groups I to VII.	Seamless, Groups II to VII.	Seamless mills buying all yarns, Groups II to VI.	Full-fashioned or both full-fashioned and seamless (East and West), Group I.	Seamless cotton (Pennsylvania and New York), Group II.	Seamless cotton (South), Group III.	Seamless cotton and silk (Pennsylvania), Group IV.	Seamless cotton and silk (West), Group V.	Seamless wool and silk (East, West, and South), Group VI.	Seamless mills, spinning yarns (East and West), Group VII.
Administrative expense—Continued.										
Bad debts.....	0.27	0.37	0.36	0.07	0.34	0.41	0.28	0.54	0.05	0.40
Taxes.....	.29	.29	.23	.29	.16	.15	.10	.46	.46	.50
Other administrative expense.....	.25	.26	.25	.24	.20	.40	.20	.12	.25	.23
Total.....	2.83	3.25	3.36	1.99	2.92	3.05	3.85	4.33	2.49	2.90
Selling expense:										
Salaries of officials.....	.34	.38	.40	.28	.65	.12	.53	.59	.03	.32
Commission and expense.....	4.23	4.65	4.05	3.39	4.87	2.89	4.16	6.14	2.32	6.15
Wages.....	.38	.38	.36	.36	.42	.27	.29	.38	.32	.47
Freight, show and shipping room.....	.06	.07	.07	.02	.06	.07	.09	.09	.03	.05
Packing cases, etc.....	.40	.43	.41	.35	.76	.06	.44	.51	.70	.49
Cartage, freight outward.....	.68	.87	1.08	.29	.53	1.14	.63	1.58	1.62	.19
Advertising.....	1.63	2.04	2.44	.79	.51	1.12	1.12	9.74	.03	.75
Other selling expense.....	.49	.61	.63	.25	.07	.37	.06	2.46	.13	.33
Total.....	8.31	9.50	9.52	5.05	7.92	5.75	7.42	21.94	5.05	9.45
Total manufacturing and selling.....	88.49	91.95	93.49	81.55	96.03	85.44	89.70	96.00	98.09	86.91
Cost of goods purchased.....	6.50	4.23	4.36	4.36	4.36	9.35	1.18	1.99	3.79	3.79
Deduct increase in stock of goods.....	1.65	1.70	2.90	1.52	2.35	2.39	3.71	4.55	1.01	2.22
Cost of goods sold.....	93.34	94.43	94.95	91.08	98.24	92.40	96.17	93.44	97.63	92.02
Manufacturing profit.....	6.66	5.52	5.05	8.92	1.76	7.60	3.83	6.56	2.32	7.08
Miscellaneous income (add to profit, deduct from loss).....	.02	.04	.05	.24	.24					
Interest paid on current loans (deduct from profit, add to loss).....	1.02	1.08	1.25	.90	2.31	1.04	.52	1.51	.75	.55
Final profit.....	5.66	4.48	3.85	8.02	3.31	6.56	3.31	5.05	1.57	6.53

a Loss.

## PERCENTAGES OF SPECIFIED ITEMS OF COST.

Examining the average percentages, in Table 34, of all establishments that reported, and considering net sales as the base, or 100 per cent, the cost of the raw materials was 46.74 per cent, the cost of goods manufactured 88.49 per cent, the manufacturing profit 6.66 per cent, and the final profit 5.66 per cent.

TABLE 34.—PERCENTAGE OF AVERAGE COST OF EACH SPECIFIED ITEM AND PROFITS, BASED ON NET SALES, BY COMBINATIONS OF GROUPS OF ESTABLISHMENTS.

Items.	All establishments reporting data, Groups I to VII.	Mills making full-fashioned or full-fashioned and seamless hosiery (East and West), Group I.	Mills making seamless hosiery, Groups II to VII.	Mills buying all yarns and making seamless hosiery, Groups II to VI.
Number of establishments.....	73	9	64	56
Net sales.....	100.00	100.00	100.00	100.00
Raw material.....	46.74	41.88	49.17	51.56
Direct labor.....	21.89	23.93	20.86	20.40
Indirect labor.....	3.88	3.59	4.02	3.66
Factory expense.....	4.84	4.21	5.15	4.99
Administrative expense.....	2.33	1.99	3.25	3.36
Selling expense.....	8.31	5.95	9.50	9.52
Total manufacturing and selling.....	88.49	81.55	91.95	93.49
Cost of goods purchased.....	6.50	11.05	4.23	4.36
Deduct increase in stock of goods.....	1.65	1.52	1.70	2.90
Cost of goods sold.....	93.34	91.08	94.48	94.95
Manufacturing profit.....	6.66	8.92	5.52	5.05
Miscellaneous income (add to profit).....	.02	.04	.04	.05
Interest (deduct from profit).....	1.02	.90	1.08	1.25
Final profit.....	5.66	8.02	4.48	3.85

## LARGEST PROFITS MADE ON FULL-FASHIONED HOSIERY.

Comparing the average percentages of the mills making full-fashioned or both full-fashioned and seamless hosiery (Group I) with the average percentages of the mills making seamless hosiery (Groups II to VII) and with mills making seamless hosiery and buying all of their yarns (Groups II to VI), it will be observed that in Group I the percentages for materials and for cost of goods sold were lower and the percentages for both manufacturing and final profit higher. In Table 35 the differences are shown by groups.

TABLE 35.—PERCENTAGES OF AVERAGE COSTS OF SPECIFIED ITEMS AND PROFITS. BASED ON NET SALES, BY GROUPS OF ESTABLISHMENTS.

Items.	Mills making full-fashioned or both full-fashioned and seamless hosiery (East and West), Group I.	Mills making seamless hosiery.					
		Cotton (Pennsylvania and New York), Group II.	Cotton (South), Group III.	Cotton and silk (Pennsylvania), Group IV.	Cotton and silk (West), Group V.	Wool and cotton mixed (East, West, and South), Group VI.	Wool and cotton mixed, mills spinning yarns (East and West), Group VII.
Number of establishments.....	9	16	16	11	9	4	8
Net sales.....	100.00	100.00	100.00	100.00	100.00	100.00	100.00
Raw material.....	41.88	50.88	50.00	51.74	44.98	69.33	41.29
Direct labor.....	23.93	24.28	18.14	26.88	17.05	15.47	22.38
Indirect labor.....	3.59	4.01	3.54	5.14	3.20	1.65	5.22
Factory expense.....	4.21	6.02	4.96	4.67	4.50	4.70	5.67
Administrative expense.....	1.99	2.92	3.05	3.85	4.33	2.49	2.90
Selling expense.....	5.95	7.92	5.75	7.42	21.94	5.05	9.45
Total manufacturing and selling.....	81.55	96.03	85.44	99.70	96.00	98.69	86.91
Cost of goods purchased.....	11.05	4.56	9.35	.18	1.99		3.79
Deduct increase in stock of goods.....	1.52	2.35	2.39	3.71	4.55	1.01	
Add decrease in stock of goods.....							2.22
Cost of goods sold.....	91.08	98.24	92.40	96.17	93.44	97.68	92.92
Manufacturing profit.....	8.92	1.76	7.60	3.83	6.56	2.32	7.08
Miscellaneous income (add to profit).....		.24					
Interest (deduct from profit).....	.90	2.31	1.04	.52	1.51	.75	.55
Final profit.....	8.02	1.31	6.56	3.31	5.05	1.57	6.53

<sup>a</sup> Loss.

The variations in the percentages for raw materials shown in the seven groups may be accounted for or partly accounted for by one or more of several causes—the different kinds of materials used, different qualities of the product, different methods of operation, and whether the product was of heavy or light weight, for winter or summer wear.

It will be observed that the average percentages for direct labor are highest in Group IV and lowest in Group VI; the selling cost is highest in Group V and lowest in Group VI; the expense for interest highest in Group II and lowest in Group IV. The percentage for materials was lowest in Group VII, as mills in this group use raw cotton or wool. The percentage for materials was highest in Group VI, composed of mills buying yarns and making hosiery of wool and cotton mixtures, while the percentages for direct labor, indirect labor, administrative expense, and selling expense were lower in this group than in any other of the seven groups. The exceptionally high selling expense in Group V, 21.94 per cent, and the large amount of goods purchased in Group I, 11.05 per cent, reduce materially the percentages for other factors of cost.

## COMPARATIVE ADMINISTRATIVE AND SELLING EXPENSE.

The percentages of the items of factory expense, administrative expense, and selling expense, which appear in Table 33, are reproduced and shown for purposes of comparison, in condensed form in Table 36.

TABLE 36.—PERCENTAGES OF AVERAGE FACTORY, ADMINISTRATIVE, AND SELLING EXPENSE, BY SPECIFIED ITEMS AND BY GROUPS OF ESTABLISHMENTS, BASED ON NET SALES.

Items.	Mills making full-fashioned or both full-fashioned and seamless hosiery (East and West), Group I.	Mills making seamless hosiery.					
		Cotton (Pennsylvania and New York), Group II.	Cotton (South), Group III.	Cotton and silk (Pennsylvania), Group IV.	Cotton and silk (West), Group V.	Wool and cotton mixed (East, West, and South), Group VI.	Wool and cotton mixed, mills spinning yarns (East and West), Group VII.
Number of establishments.....	9	16	16	11	9	4	8
Factory expense:							
Power, light, and heat.....	0.84	1.28	1.14	1.05	1.53	1.04	2.29
Repairs.....	.59	.91	.46	.73	.87	.46	.65
Depreciation.....	1.84	2.82	2.38	2.03	1.60	2.33	1.19
Fire insurance.....	.13	.32	.16	.24	.18	.22	.12
Other factory expense.....	.81	.69	.82	.62	.32	.65	1.42
Total.....	4.21	6.02	4.96	4.67	4.50	4.70	5.67
Administrative expense:							
Salaries of officials.....	.63	1.05	1.06	1.74	.68	.90	.51
Salaries of office force.....	.47	.81	.87	.92	1.58	.64	.86
Rent, general office.....			(a)				
Office expense.....	.18	.30	.09	.32	.69	.14	.34
Insurance, except fire.....	.07	.02	.07	.05	.16	.03	.04
Collection expense.....	.04	.04		.24	.10	.08	.02
Bad debts.....	.07	.34	.41	.28	.54	.05	.40
Taxes.....	.29	.16	.15	.10	.46	.40	.50
Other administrative expense.....	.24	.20	.40	.20	.12	.25	.23
Total.....	1.99	2.92	3.05	3.85	4.33	2.49	2.90
Selling expense:							
Salaries of officials.....	.28	.65	.12	.63	.59	.03	.32
Commission and expense.....	3.39	4.87	2.89	4.16	6.14	2.19	6.65
Wages.....	.56	.42	.07	.29	.83	.32	.47
Rent, show and shipping rooms.....	.02		.27				
Fire insurance.....	.02	.06	.07	.09	.09	.03	.05
Packing cases, etc.....	.35	.76	.06	.44	.51	.70	.49
Cartage and freight outward.....	.29	.58	1.14	.63	1.58	1.62	.19
Advertising.....	.51	.76	1.12	9.74	.03	.75	
Other selling expense.....	.25	.07	.37	.06	2.46	.13	.53
Total.....	5.95	7.92	5.75	7.42	21.94	5.05	9.45

<sup>a</sup> Less than one one-hundredth of 1 per cent.

In examining this table the details help to explain why the percentage for administrative and selling expenses were higher in Group V than in any other of the seven groups and lower in Group VI than in any other. It will be noticed that the advertising account is very large in Group V and scarcely anything at all in Group VI.

## PERCENTAGES OF COST AND PROFIT BY ESTABLISHMENTS.

Table 37 shows the data for each establishment separately in the same form as they appear in Table 33 for groups.

TABLE 37.—PERCENTAGES OF SPECIFIED ITEMS OF EXPENSE AND PROFIT OR LOSS, BASED ON NET SALES, BY SEPARATE ESTABLISHMENTS.

Items.	No. 1.	No. 2.	No. 3.	No. 4.	No. 5.	No. 6.	No. 7.	No. 8.	No. 9.	No. 10.	No. 11.	No. 12.	No. 13.	No. 14.	No. 15.
Net sales.....	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00
Raw material.....	48.06	58.50	46.90	54.38	59.58	47.96	21.40	48.63	38.10	46.47	45.54	14.84	49.61	60.83	49.73
Direct labor:															
Wages.....	33.72	17.17	35.70	26.26	25.75	24.70	11.54	27.86	25.30	23.25	31.28	21.57	24.97	25.59	27.94
Paid to contractors.....	33.72	17.17	35.70	30.52	25.75	24.70	11.54	27.86	25.30	23.25	31.28	21.57	24.97	25.59	27.94
Total.....	1.40	.75	1.53	.57	.67	.61	.24	1.03	.17	1.02	1.49	3.66	2.23	2.42	2.55
Indirect labor:															
Salaries of officials.....	3.44	.68	.50	2.04	5.35	.91	1.65	3.28	4.52	1.39	2.46	.....	1.88	.....	4.39
Wages.....	4.84	1.43	2.03	2.61	6.02	1.52	1.89	4.31	4.69	2.41	3.95	3.66	4.11	2.42	6.94
Total.....	.....	.12	.83	1.96	1.24	.44	.68	.73	.96	.13	.14	1.44	4.53	1.06	.19
Factory expense:															
Power, heat, light.....	.62	.26	.52	1.11	.33	1.06	.29	.41	.84	.92	.93	1.29	.90	.33	.60
Repairs.....	3.39	1.42	2.84	.94	5.27	2.83	.85	1.74	1.55	2.17	5.55	4.65	3.37	2.00	3.16
Depreciation.....	.11	.11	.11	.11	.11	.11	.11	.11	.11	.11	.11	.11	.11	.11	.11
Fire insurance.....	.11	.11	.11	.11	.11	.11	.11	.11	.11	.11	.11	.11	.11	.11	.11
Other factory expense.....	.11	.11	.11	.11	.11	.11	.11	.11	.11	.11	.11	.11	.11	.11	.11
Total.....	4.82	2.09	4.57	4.66	7.64	4.86	2.39	3.81	4.90	7.04	8.35	12.15	9.52	3.72	5.50
Administrative expense:															
Salaries of officials.....	1.40	.23	1.53	.57	.67	.15	.94	.26	.77	1.75	.75	1.07	.56	1.21	1.28
Wages.....	.55	.44	.42	1.01	.62	.66	.62	.11	.52	.89	.....	2.84	.....	.....	.80
Rent, general office.....	.33	.17	.26	.13	.11	.35	.13	.07	.25	.24	.45	.82	.33	.31	.58
Office expense.....	.01	.01	.01	.01	.01	.01	.01	.01	.01	.01	.01	.01	.01	.01	.01
Insurance, except fire.....	.01	.01	.01	.01	.01	.01	.01	.01	.01	.01	.01	.01	.01	.01	.01
Collection expense.....	.17	.01	.01	.01	.01	.01	.01	.01	.01	.01	.01	.01	.01	.01	.01
Bad debts.....	.07	.07	.07	.07	.07	.07	.07	.07	.07	.07	.07	.07	.07	.07	.07
Other administrative expense.....	.40	.06	.28	.02	1.03	.14	.20	.12	.27	.....	.64	.69	.....	.....	.17
Total.....	2.85	.98	2.89	2.47	2.61	1.54	2.42	.86	2.57	4.35	2.58	6.61	1.79	1.52	3.06
Selling expense:															
Salaries of officials.....	1.40	.75	.....	.57	.67	.....	.23	.26	.17	.....	.75	.....	.83	1.21	1.28
Wages.....	4.44	2.62	3.11	1.42	1.51	4.83	3.95	3.43	3.54	1.52	5.15	8.51	.....	.....	1.48
Commission and expense.....	.....	.40	.40	.40	.40	.40	.40	.40	.40	.40	.40	.40	.40	.40	.40
Rent, show and shipping rooms.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....

Fire insurance.....	.02	.06	.03	.03	.09	.02	.01	.02	.02	.02	.05	.43	.11	.....	.14
Packing cases, etc.....	.19	.50	.42	.24	.67	.14	.17	.62	.62	1.09	.69	.61	.22	.19	.88
Cartage and freight, outward.....	.55	.....	.27	.24	.29	.25	.38	.26	.26	1.20	1.08	2.46	.51	.....	2.98
Advertising.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Other selling expense.....	.41	.12	.....	.....	.....	1.20	.....	.08	.08	.02	.....	.....	.....	.....	.....
Total.....	6.25	6.68	4.12	3.62	2.99	6.04	8.35	4.35	7.19	4.59	9.37	16.23	1.77	1.40	7.08
Total manufacturing and selling.....	100.54	86.85	96.21	96.26	104.59	86.62	47.99	89.82	82.75	91.11	101.07	75.06	91.77	95.48	100.55
Cost of goods purchased.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Deduct increase in stock of goods.....	13.37	1.98	.....	.70	.....	.06	.90	6.37	10.22	2.61	.63	.16	2.32	.....	4.00
Add decrease in stock of goods.....	.....	.....	.....	.....	.....	.....	.....	.....	.61	.....	.....	.....	2.61	.....	.....
Cost of goods sold.....	87.17	88.83	96.21	97.56	104.59	86.68	92.73	83.25	93.58	92.11	101.04	95.84	96.70	95.48	100.11
Manufacturing profit.....	12.83	11.17	3.79	2.44	4.59	13.32	7.27	16.75	6.42	7.89	1.04	4.16	3.30	4.52	1.11
Interest paid on current loans (deduct from profit, add to loss).....	2.45	.33	.....	.44	1.19	.86	.94	.....	1.92	5.47	.....	1.95	.....	.12	.68
Final profit.....	10.38	10.84	3.79	2.00	5.78	12.46	6.33	16.75	4.50	2.42	1.04	2.21	3.30	4.40	1.79

a Loss.



TABLE 37.—PERCENTAGES OF SPECIFIED ITEMS OF EXPENSE AND PROFIT OR LOSS, BASED ON NET SALES, BY SEPARATE ESTABLISHMENTS.—Con.

Items.	No. 16.	No. 17.	No. 18.	No. 19.	No. 20.	No. 21.	No. 22.	No. 23.	No. 24.	No. 25.	No. 26.	No. 27.	No. 28.	No. 29.	No. 30.
Net sales.....	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00
Raw material.....	50.38	66.40	47.84	44.86	42.43	63.18	51.53	56.00	58.13	41.73	62.97	51.75	54.39	59.04	62.23
Direct labor:															
Wages.....	34.78	23.07	31.19	21.84	20.42	21.36	21.13	30.13	28.11	15.77	26.52	27.37	21.24	26.38	14.89
Paid to contractors.....	34.78	23.07	31.19	21.84	20.42	21.36	21.13	30.13	28.11	15.77	26.52	27.37	21.24	26.38	14.89
Indirect labor:															
Salaries of officials.....	2.25	1.47	.85	1.02	1.42	1.61	.....	1.32	.98	1.03	.....	.....	.95	.39	.....
Wages.....	2.77	2.13	3.33	2.12	1.50	4.80	3.57	.68	4.65	2.13	6.58	2.32	4.90	5.55	3.97
Total.....	5.02	3.60	4.18	3.14	2.92	6.41	3.57	2.00	5.63	3.16	6.58	2.32	5.85	5.94	3.97
Factory expense:															
Power, heat, light.....	.23	.89	2.07	1.11	2.18	.54	1.22	1.82	2.87	.14	2.92	1.60	.62	.74	1.66
Repairs.....	.61	.53	.37	.25	2.97	2.45	.49	1.36	.27	.33	2.22	1.99	.33	.91	3.56
Depreciation.....	2.71	3.42	2.88	1.80	2.18	3.88	3.32	3.25	3.34	1.65	6.34	4.26	3.34	3.91	3.54
Other factory expense.....	.78	.68	1.07	.24	.35	.75	.37	.01	.06	.03	.67	.30	.82	.99	.24
Total.....	4.33	7.03	6.39	4.13	7.68	8.05	5.90	6.81	7.75	2.92	13.15	9.43	6.85	6.97	7.01
Administrative expense:															
Salaries of officials.....	.66	.74	.17	.26	.71	.94	.29	1.32	.98	1.77	4.87	.....	.95	.39	1.66
Office expense.....	.88	.41	.33	.79	.79	1.03	.75	1.05	.77	.89	.....	.31	1.90	.....	.50
Insurance, except fire.....	.53	.22	.12	.11	.09	.18	.12	.20	.28	.34	.08	.07	.47	.04	.....
Collection expense.....	.02	.03	.02	.02	.03	.01	.02	.02	.03	.03	.....	.....	.....	.....	.....
Bad debts.....	.19	.06	.12	.05	.06	.06	.16	.04	.20	1.65	.27	.30	.42	.22	.10
Other administration expense.....	.13	.08	.12	.35	.35	.21	.....	.36	.30	.37	.....	.62	.....	.53	.19
Total.....	2.31	2.54	.92	1.62	2.08	2.61	1.35	3.01	2.23	4.88	5.37	1.50	2.54	.96	2.45
Selling expense:															
Salaries of officials.....	2.81	.74	.26	.....	.71	.94	.48	1.32	.98	1.77	4.87	.....	.95	.39	1.66
Commission and expense.....	3.25	.89	.67	4.74	1.71	1.65	3.05	1.11	5.61	12.14	1.56	.....	2.26	2.04	.92
Wages.....	.70	.....	.....	.32	.14	.57	.27	.73	.49	.....	.....	.....	.74	.....	.22
Rent, show, and shipping rooms.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....

Fire insurance.....	51	.....	32	.08	.07	.....	.09	.....	.03	.....	.55	.19	.....	.....	.07
Packing cases, etc.....	81	.....	36	.62	.72	.....	.56	.59	1.01	1.13	.....	.....	.....	.....	.....
Cartage, freight, outward.....	70	.....	1.06	.56	.56	.62	.33	.65	.81	1.42	.67	.....	1.02	.47	.24
Advertising.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	1.66	.50	.75	2.71	.53	.19
Other selling expense.....	.....	1.08	.....	.....	.....	.21	.....	.12	.....	.....	.....	.....	.....	.....	.....
Total.....	8.81	2.71	3.15	6.32	3.91	3.99	4.78	4.52	8.93	15.35	5.35	.94	6.73	3.43	1.54
Total manufacturing and selling.....	105.63	105.35	93.67	81.91	88.44	105.60	88.26	102.47	110.78	84.48	116.94	93.31	98.60	102.72	92.09
Cost of goods purchased.....	6.71	.....	.....	.....	.....	8.66	8.66	.....	12.41	15.47	17.95	1.14	.91	.....	.85
Deduct increase in stock of goods.....	.....	.....	3.23	7.01	1.70	.....	.81	.....	.....	.....	.....	.....	.....	.....	.....
Add decrease in stock of goods.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Cost of goods sold.....	98.92	105.35	96.90	88.92	90.14	105.60	97.73	102.47	98.37	98.89	101.99	92.17	97.69	102.72	91.24
Manufacturing profit.....	1.08	5.35	3.10	11.08	9.86	5.60	2.27	2.47	1.63	1.11	1.99	7.83	2.31	2.72	8.76
Miscellaneous income (add to profit, deduct from loss).....	.....	.....	.....	.....	.....	.85	.20	.50	2.63	5.51	.....	3.61	2.25	.....	1.91
Interest (deduct from profit, add to loss).....	.22	.21	2.17	1.04	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Final profit.....	.86	5.56	.93	10.04	9.86	6.45	2.07	2.97	1.00	3.27	1.99	4.22	.06	2.72	6.85

a Loss.

TABLE 37.—PERCENTAGES OF SPECIFIED ITEMS OF EXPENSE AND PROFIT OR LOSS, BASED ON NET SALES, BY SEPARATE ESTABLISHMENTS—CON.

Items.	No. 31.	No. 32.	No. 33.	No. 34.	No. 35.	No. 36.	No. 37.	No. 38.	No. 39.	No. 40.	No. 41.	No. 42.	No. 43.	No. 44.	No. 45.
Net sales.....	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00
Raw material.....	60.20	62.74	41.46	85.24	51.04	57.55	62.75	51.90	44.77	58.96	39.76	25.14	60.17	52.97	36.20
Direct labor:															
Wages.....	15.29	19.87	24.39	12.84	18.52	28.15	17.56	26.59	20.24	20.56	13.46	36.35	15.22	36.35	26.89
Paid to contractors.....												.18		7.44	
Total.....	15.29	19.87	24.39	12.84	18.52	28.15	17.56	26.59	20.24	20.56	13.46	36.35	15.22	43.79	26.89
Indirect labor:															
Salaries of officials.....	1.46	9.08	1.03	7.72	.99			.33	.93			7.19	1.69	1.70	.44
Wages.....	2.86		2.87	7.74	5.24	6.21	2.09	3.16	1.37	6.57	1.41	5.12	6.87	4.19	6.08
Total.....	4.32	9.08	3.90	8.46	6.23	6.21	2.09	3.49	2.30	6.57	1.41	12.31	8.56	5.89	6.52
Factory expense:															
Power, heat, light.....	1.71	3.14	2.57	.86	1.66	2.48	.99	1.45	1.28	1.28	.47	.23	.32		1.90
Repairs.....	2.46		1.68	.24	1.14	1.60	.71	1.27	.03	.25	.06	.74	.43	1.55	.77
Depreciation.....	2.12	3.72	2.95	3.59	2.94	5.66	2.54	1.92	1.90	1.58	1.62	3.07	5.59	4.33	3.51
Repairs to machinery.....	1.26	.26	1.38	.18	.26	.27	.09	.30	.29	.07		1.23	.87	.96	.64
Other factory expense.....	1.79	3.20	1.86	1.56	.26	.94	1.31	.28	.64	1.04	.43	1.01	.19	.45	.51
Total.....	8.34	11.02	9.44	6.42	5.20	10.35	5.64	5.22	4.14	4.22	2.53	6.28	7.40	7.29	7.26
Administrative expense:															
Salaries of officials.....	2.03	1.45	1.02	2.52	1.92	.91	1.39	1.25	1.44	.48	.65	2.59	.66	2.55	.77
Salaries of clerical force.....		2.18	1.15	.16	.86	.06	.91	.21	.54	.80	1.30		1.10	.85	1.13
Rent, general office.....			.32	.13	.81	.12		.16		.05	.14	.07	.43	.32	.73
Office expense.....								.05				.12	1.07		.06
Insurance, except fire.....							.09				.94	1.87	.24	1.25	.98
Collection expense.....							.02	.18	.02	.10	.02	.26	.18	.13	.28
Bad debts.....	.12	.42	.24	.54	.20	.17				.32	.06	.55	.35	.30	.45
Taxes.....	.10	.63	.24	.84	.91	.09	.05	.18							
Other administrative expense.....	.85	.10	.73	.37	.64	.22	.44								
Total.....	3.10	4.78	3.46	3.72	5.46	2.63	2.09	2.18	1.92	1.49	3.60	5.86	3.87	5.40	4.30
Selling expense:															
Salaries of officials.....				.32	.74			.65				4.60	1.69	2.55	.45
Commission and expense.....	.51	6.42	2.18	2.58	6.54	1.97	.31	.45	3.92	.37	4.02	3.82	1.81	4.08	4.50
Wages.....					.58			.40					.88	.49	.66
Rent, show and shipping rooms.....											.70				

Fire insurance.....	.09	.20	.17	.06	.09	.12	.06	.04	.28	.03		.23	.15		.47
Packing cases, etc.....			.84	.07	.23	1.62		.25	2.20	2.02	1.32	.43	.49	1.17	.64
Cartage and freight, outward.....					.12	.57				1.83		1.00			
Advertising.....	.85		.63	1.27	1.63	.32	.26		.32		.15	.35		1.64	.45
Other selling expense.....															
Total.....	1.45	6.62	4.12	4.30	12.69	4.09	.63	2.23	6.72	2.42	8.02	10.45	5.43	9.93	7.38
Total.....	92.70	114.11	86.77	120.98	99.23	108.98	90.76	91.61	80.09	94.22	68.83	96.39	100.65	128.27	88.55
Cost of goods purchased.....											24.60				
Deduct increase in stock of goods.....	1.15	14.80		12.70	9.01	4.32		3.46			2.15	11.51	.90	24.27	5.60
Add decrease in stock of goods.....															
Cost of goods sold.....	91.55	99.31	86.77	108.28	90.22	104.63	90.76	95.06	80.09	94.22	90.70	84.88	99.75	101.00	94.15
Manufacturing profit.....	8.45	.69	13.23	8.28	9.78	4.33	9.24	4.94	19.91	5.78	9.30	15.12	.25	1.00	5.85
Interest (deduct from profit, add to loss).....		3.39		2.10	2.53	.71	.89	1.25		.92	.80		1.32	2.28	.73
Final profit.....	8.45	2.70	13.23	8.10	7.25	5.54	8.35	3.69	19.91	4.86	8.40	15.12	1.07	3.28	5.12

a Loss.

TABLE 37.—PERCENTAGES OF SPECIFIED ITEMS OF EXPENSE AND PROFIT OR LOSS, BASED ON NET SALES, BY SEPARATE ESTABLISHMENTS—Col.

Items.	No. 46.	No. 47.	No. 48.	No. 49.	No. 50.	No. 51.	No. 52.	No. 53.	No. 54.	No. 55.	No. 56.	No. 57.	No. 58.	No. 59.	No. 60.
Net sales.....	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00
Raw material.....	55.84	39.23	45.15	55.68	53.34	54.17	53.04	61.80	68.46	62.89	49.49	43.26	31.02	41.34	51.76
Direct labor:															
Wages.....	30.04	28.92	38.40	25.61	26.79	21.00	27.77	32.76	40.02	20.64	19.47	21.38	12.05	19.63	13.83
Paid to contractors.....	30.04	28.92	38.40	25.61	26.79	21.00	27.77	32.76	40.02	20.64	19.47	21.38	12.05	19.63	13.83
Total.....	2.74	3.67	98	1.09	1.99	1.11	.45	2.60	6.09	2.41	1.65	5.62	1.91	1.52	.46
Indirect labor:	4.40	3.28	5.74	1.09	3.23	1.96	6.09	3.37	6.42	.49	3.80	5.62	2.06	3.68	2.66
Salaries of officials.....	7.14	3.95	6.72	1.09	5.22	3.07	6.54	5.97	6.42	2.90	5.45	5.62	3.97	5.20	3.12
Total.....	2.01	1.19	.07	1.26	1.54	.19	1.43	2.74	2.09	.75	2.78	3.00	1.02	3.61	1.43
Factory expense:	1.18	1.42	1.58	1.56	1.28	1.39	.39	.78	1.01	1.38	.96	1.27	.37	3.63	1.65
Power, heat, light.....	2.95	1.52	2.00	1.93	3.23	1.39	.99	4.73	6.81	2.16	3.54	2.13	1.73	2.15	1.91
Repairs.....	1.47	.21	.45	.21	.08	.22	.16	.68	.90	.59	.57	.32	.34	.35	.35
Depreciation.....	1.68	.21	.45	.21	.08	.22	.16	.68	.90	.59	.57	.32	.34	.35	.35
Other factory expense.....	8.21	3.55	4.10	4.76	6.13	2.42	4.36	9.04	11.70	4.98	8.89	7.02	3.62	10.97	4.42
Total.....	5.47	.33	.61	.87	1.99	1.11	2.24	1.30	4.46	.97	1.65	1.45	.57	1.52	1.83
Administrative expense:	5.47	.33	.61	.87	1.99	1.11	2.24	1.30	4.46	.97	1.65	1.45	.57	1.52	1.83
Salaries of officials.....	.70	.70	.70	1.03	.86	1.09	1.09	1.09	1.09	.37	.37	.37	.74	1.08	1.23
Rent, general office.....	.50	.23	.10	.24	.04	.02	.19	.72	1.34	.71	.49	.15	.15	.31	.73
Office expense.....	.04	.01	.06	.03	.04	.09	.03	.97	.09	.37	.07	.08	.19	.03	.13
Insurance, except fire.....	1.13	.16	.01	.03	.04	.09	.03	.05	.07	.14	.08	.07	.03	.07	.49
Collection expense.....	.28	.06	.10	.08	.04	.15	.05	.19	.04	1.21	.98	.47	.59	.33	1.04
Bad debts.....	.83	.10	.08	.08	.04	.15	.05	.19	.04	.27	.27	.24	.22	.77	.14
Other administrative expense.....	8.80	1.68	1.60	2.66	3.04	4.82	3.72	3.18	7.71	4.07	3.97	6.27	3.03	4.06	6.16
Total.....	.92	.34	.34	.34	2.43	1.11	.60	2.60	9.37	.92	2.93	9.04	1.77	3.64	.46
Selling expense:	3.71	.30	.35	.30	.15	.34	.30	.30	2.32	.57	.57	1.61	.85	1.75	1.50
Salaries of officials.....	3.71	.30	.35	.30	.15	.34	.30	.30	2.32	.57	.57	1.61	.85	1.75	1.50
Commission and expense.....															
Wages.....															
Rent, show and shipping rooms.....															

Fire insurance.....	.05	.14	.13	.11	.02	.18	.01	.29	.84	.21	.09	.19	.06	.02	.14
Packing cases, etc.....	.33	.42	.66	.16	.46	.38	.59	.59	.93	.29	.95	.43	.46	.58	.32
Carriage and freight, outward.....	.47	.49	.28	.55	.95	3.89	1.01	.02	1.11	2.45	1.18	2.25	.78	3.48	1.73
Advertising.....										.20	.06	.37	.37	1.37	6.46
Other selling expense.....												.24			
Total.....	5.48	4.55	3.74	3.67	4.01	13.67	7.43	4.02	20.38	10.50	5.78	17.63	8.90	12.16	29.06
Total manufacturing and selling.....	115.51	81.88	97.71	94.07	98.53	99.15	102.86	116.77	154.69	105.98	93.05	101.18	62.59	93.36	108.35
Cost of goods purchased.....	23.18	2.36	4.16	3.77	2.84	10.34	.11	3.67	61.24	12.31	1.85	3.66	.01	32.70	.67
Deduct increase in stock of goods.....							.24							.83	
Add decrease in stock of goods.....															
Cost of goods sold.....	92.33	97.66	93.55	97.84	95.69	88.81	103.21	113.10	104.54	93.67	94.90	97.52	95.28	94.19	102.28
Manufacturing profit.....	7.67	2.34	6.45	2.16	4.31	11.19	3.21	3.10	4.54	6.33	5.10	2.48	4.72	5.81	2.28
Interest (deduct from profit, add to loss).....	.65	.37	.27	.31	.23	.47	.68		3.89	.93	1.59	4.65		2.75	1.41
Final profit.....	7.02	1.97	6.18	1.85	4.08	10.72	3.89	3.10	8.43	5.40	3.51	2.17	4.72	3.06	3.69

a Loss.

TABLE 37.—PERCENTAGES OF SPECIFIED ITEMS OF EXPENSE AND PROFIT OR LOSS, BASED ON NET SALES, BY SEPARATE ESTABLISHMENTS—Con.

Items.	No. 61.	No. 62.	No. 63.	No. 64.	No. 65.	No. 66.	No. 67.	No. 68.	No. 69.	No. 70.	No. 71.	No. 72.	No. 73.
Net sales.....	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00
Raw material.....	43.00	41.44	66.25	70.11	71.66	35.85	32.02	34.32	39.84	53.94	47.16	35.29	42.88
Direct labor:													
Wages.....	16.79	29.73	15.14	12.42	17.07	38.10	32.92	41.96	40.83	27.87	26.39	17.41	18.64
Paid to contractors.....	16.79	29.73	15.14	12.42	17.07	38.10	32.92	41.96	40.83	27.87	26.39	17.41	18.64
Total.....	79.79	1.20	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Indirect labor:													
Salaries of officials.....	1.75	1.87	2.11	1.33	.61	1.81	1.27	.76	1.94	.51	.39	.43	.37
Wages.....	2.54	3.07	2.11	1.92	1.16	2.69	2.65	4.59	2.88	7.14	9.64	2.55	5.24
Total.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Factory expense:													
Power, heat, and light.....	1.23	3.59	1.84	1.34	.32	6.83	2.14	2.96	1.38	3.68	.85	.93	3.77
Repairs.....	.62	1.09	.08	.73	.41	.50	1.09	1.61	.92	1.01	.78	.41	.60
Depreciation.....	1.12	4.24	2.64	1.52	2.65	2.45	4.43	1.44	2.17	2.86	1.30	.64	1.01
Fire insurance.....	.08	1.05	.07	.22	.25	.32	.38	.31	.10	.45	.08	.15	.04
Other factory expense.....	.23	.43	.35	.76	.73	3.16	2.35	1.79	3.01	1.27	1.60	.48	1.71
Total.....	3.26	10.42	4.98	4.57	4.36	13.26	10.59	8.11	7.58	9.27	4.61	2.61	7.13
Administrative expense:													
Salaries of officials.....	.16	3.60	1.56	.50	.73	.88	1.26	.76	1.29	.57	.36	.47	.45
Salaries of office force.....	1.77	.....	.49	.87	.58	.....	.56	1.46	.39	1.47	.29	.96	1.07
Office expense.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Insurance, except fire.....	.76	.24	.15	.14	.11	.39	.19	.30	.29	.32	.04	.32	.52
Collection expense.....	.15	.....	.00	.03	.10	.....	.....	.06	.66	.39	.07	.01	.02
Bad debts.....	.02	.....	.25	.....	.....	.....	.....	.07	.....	.08	.....	.05	.....
Taxes.....	.40	.....	.52	.....	.12	.....	.....	.27	.10	.10	.41	.38	.51
Other administrative expense.....	.53	.17	.82	.38	.65	.15	.84	.31	.50	.39	.50	.51	.51
Total.....	3.79	4.01	2.81	2.14	2.50	1.53	3.05	4.09	2.56	4.05	1.79	2.86	3.35
Selling expense:													
Salaries of officials.....	.65	1.20	.....	.....	.....	.80	1.26	.76	1.20	.51	.37	.....	.31
Commission and expense.....	5.59	.....	1.95	4.45	.81	10.44	7.71	2.14	.....	3.09	4.20	8.64	7.69
Wages.....	.52	.....	.42	.51	.15	.....	.....	.....	.....	.....	.....	.68	.08
Rent, show and shipping rooms.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....

Fire insurance.....	.05	.06	.03	.....	.05	.....	.20	.....	.13	.38	.02	.03	.02
Packing cases, etc.....	1.54	.96	.65	.....	1.22	.....	1.47	1.20	1.65	.92	.....	.57	.42
Cartage and freight, outward.....	1.46	.97	.23	.10	2.44	.....	.....	.61	1.83	.51	.....	.08	.15
Advertising.....	13.17	.....	.13	.....	.....	.....	.....	.....	.....	.....	.....	1.39	.97
Other selling expense.....	2.26	.31	.....	.38	.02	.....	.38	.93	.....	.....	.....	.13	1.18
Total.....	24.24	3.50	5.41	5.44	4.69	11.33	11.02	6.29	4.90	5.41	4.59	11.52	11.42
Total manufacturing and selling.....	93.62	92.17	96.70	96.60	101.44	102.76	92.25	99.36	98.29	107.68	94.18	72.24	88.66
Cost of goods purchased.....	3.73	.....	.87	.....	2.74	.....	.45	.....	.98	.....	3.77	13.74	.....
Deduct increase in cost of goods.....	.....	.97	.....	1.19	.....	.10	.....	1.76	.....	1.90	.....	1.33	6.64
Add decrease in stock of goods.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Cost of goods sold.....	86.89	93.14	95.83	97.79	98.70	102.86	91.80	101.12	97.36	103.58	90.41	87.31	95.20
Manufacturing profit.....	10.11	6.86	4.17	2.21	1.30	2.86	8.20	2.12	2.64	2.85	9.59	12.69	4.80
Interest (deduct from profit, add to loss).....	1.29	.....	.97	1.73	.....	2.56	2.56	2.22	2.22	3.46	.50	.20	.05
Final profit.....	8.82	6.86	3.20	.48	1.30	2.86	5.64	2.37	.42	2.13	9.09	12.40	4.75

e Loss.



## COST BASED ON MANUFACTURING AND SELLING EXPENSE.

The preceding tables in this chapter of the report show the percentages of the items of cost and the percentages of profit based on net sales. The percentages of the items of cost, if based on the total of the cost of goods manufactured and the selling expense, are different from what they are if based on net sales.

If based on the net sales, the item of profit is a part of the divisor, and in that case the percentage of each item of cost is smaller than when the computation is based on the cost of manufacturing and selling. When there is a loss, the divisor is correspondingly smaller and the quotient in each case is larger.

Furthermore, the amount of goods manufactured during a business year may be greater or less than the amount of net sales. Comparison of the inventory of finished goods on hand at the end of a business year with the inventory at the beginning of the year may show a smaller amount on hand at the end of the year, in which case the quantity of the goods sold during the year would have been greater than the quantity manufactured and purchased. If the closing inventory were greater than the opening inventory, the quantity of goods sold during the year would have been less than the quantity manufactured and purchased.

In the series of tables which follow the percentages of the items of cost are based on the total manufacturing and selling expense—that is, on the total cost of the product and selling expense of the factory during the year—and not on the amount of sales.

Table 38 gives the percentage of items of cost, by divisions and subdivisions, based on the total manufacturing and selling expense. It shows the data for all establishments reporting (Group I to VII) for mills making seamless hosiery (Groups II to VII), and for mills which buy their yarns and make seamless hosiery (Groups II to VI). In Table 39 the data are given separately for each Group I to VII.

Comparing the data for Group I, Table 39, showing the percentages of the items of cost of the product in mills making full-fashioned hosiery, with the data for groups II to VI, Table 38, showing such percentages for mills buying all yarns and making seamless hosiery, it will be seen that in Group I the percentage of direct labor was considerably larger and the percentage of indirect labor also was larger, while the percentages for materials, factory expense, administrative expense, and selling expense were smaller.

Comparing the data for Group VII, Table 39, showing the percentages of the items of cost of the product in mills spinning all or part of their yarns and making seamless hosiery, with the data for Groups II to VI, Table 38, showing percentages for mills buying all yarns and making seamless hosiery, it will be seen that in Group VII the percentages for direct labor, indirect labor, factory expense, and selling expense are somewhat larger. In Group VII the percentage for material is considerably smaller, owing to the fact that the materials are cotton and wool instead of yarns. In Group VII the percentage for the administrative expense is slightly lower.

Group II is composed of 16 mills making seamless cotton hosiery, 15 in Pennsylvania and 1 in New York; Group III, of 16 mills making seamless cotton hosiery, 6 in Georgia, 4 in North Carolina, 3 in Maryland, and 1 each in South Carolina, Tennessee, and Missouri.

Comparing the data for these two groups, it will be seen that in Group II the percentages for direct labor, indirect labor, factory expense, and selling expense are higher, and the percentages for materials and administrative expense are lower.

TABLE 38.—PERCENTAGES OF SPECIFIED ITEMS OF EXPENSE, BASED ON THE TOTAL MANUFACTURING AND SELLING EXPENSE, BY COMBINATIONS OF GROUPS OF ESTABLISHMENTS.

Items.	All establishments reporting data, Groups I to VII.	Mills making seamless hosiery, Groups II to VII.	Mills buying all yarns and making seamless hosiery, Groups II to VI.
Number of establishments.....	73	64	56
Cost of materials, manufacturing, and selling.....	100.00	100.00	100.00
Raw material.....	52.82	53.47	55.15
Direct labor:			
Wages.....	24.60	22.64	21.76
Paid to contractors.....	.13	.05	.07
Total.....	24.73	22.69	21.83
Indirect labor:			
Salaries of officials.....	.78	.81	.88
Wages.....	3.60	3.56	3.03
Total.....	4.38	4.37	3.91
Factory expense:			
Power, heat, light.....	1.42	1.59	1.30
Repairs.....	.72	.73	.72
Depreciation.....	2.20	2.17	2.40
Fire insurance.....	.20	.21	.23
Other factory expense.....	.93	.90	.69
Total.....	5.47	5.60	5.34
Administrative expense:			
Salaries of officials.....	.95	1.04	1.17
Salaries of office force.....	.90	1.04	1.05
Rent, general office.....	(a)	(a)	(a)
Office expense.....	.29	.33	.31
Insurance, except fire.....	.07	.07	.09
Collection expense.....	.07	.07	.09
Bad debts.....	.31	.40	.39
Taxes.....	.32	.32	.24
Other administrative expenses.....	.28	.27	.27
Total.....	3.20	3.54	3.59
Selling expense:			
Salaries of officials.....	.39	.41	.42
Commission and expense.....	4.78	5.06	4.33
Wages.....	.50	.41	.38
Rent, show and shipping rooms.....	.06	.08	.10
Fire insurance.....	.06	.07	.08
Packing cases, etc.....	.46	.47	.44
Cartage and freight outward.....	.78	.95	1.15
Advertising.....	1.84	2.22	2.60
Other selling expense.....	.55	.66	.68
Total.....	9.40	10.33	10.18

<sup>a</sup> Less than one one-hundredth of 1 per cent.

Group IV is composed of 11 mills making seamless hosiery of cotton and silk mixed, all in Pennsylvania; Group V, of 9 mills making seamless hosiery of cotton and silk mixed, 4 in Wisconsin, 3 in Ohio, and 2 in Illinois. Comparing the data for these two groups, it will be seen that the principal differences in percentages are for materials and selling expense. In Group V the percentage

for selling expense is extraordinarily large, owing to the very large percentage for advertising. This accounts for the much lower percentages for materials and direct labor in Group V because, if the percentages for certain items are unusually high, the percentages for other items must be correspondingly low, as 100 is the total of all. In Group IV the percentage for indirect labor is somewhat higher and the percentages for factory expense and administrative expense are slightly lower.

TABLE 39.—PERCENTAGES OF SPECIFIED ITEMS OF EXPENSE, BASED ON THE TOTAL MANUFACTURING AND SELLING EXPENSE, BY GROUPS OF ESTABLISHMENTS.

Items.	Establishments buying all yarns and making—						Establishments spinning yarns and making seamless hosiery (East and West), Group VII.
	Full-fashioned or both full-fashioned and seamless hosiery (East and West), Group I.	Seamless cotton hosiery (Pennsylvania and New York), Group II.	Seamless cotton hosiery (South), Group III.	Seamless cotton and silk hosiery (Pennsylvania), Group IV.	Seamless cotton and silk hosiery (West), Group V.	Seamless wool and cotton hosiery (East, West, and South), Group VI.	
Number of establishments.....	9	16	16	11	9	4	8
Cost of materials, manufacturing, and selling.....	100.00	100.00	100.00	100.00	100.00	100.00	100.00
Raw material.....	51.35	52.99	58.52	51.89	46.85	70.25	47.51
Direct labor:							
Wages.....	29.04	25.11	21.22	26.78	17.76	15.68	25.75
Paid to contractors.....	.31	.17		.18			
Total.....	29.35	25.28	21.22	26.96	17.76	15.68	25.75
Indirect labor:							
Salaries of officials.....	.71	1.24	.61	1.13	.92	.45	.57
Wages.....	3.70	2.93	3.54	4.03	2.41	1.22	5.44
Total.....	4.41	4.17	4.15	5.16	3.33	1.67	6.01
Factory expense:							
Power, heat, light.....	1.04	1.33	1.34	1.05	1.60	1.05	2.63
Repairs.....	.72	.95	.54	.73	.90	.46	.75
Depreciation.....	2.25	2.94	2.78	2.03	1.67	2.36	1.37
Fire insurance.....	.16	.34	.19	.24	.19	.23	.14
Other factory expense.....	1.00	.72	.95	.63	.33	.66	1.63
Total.....	5.17	6.28	5.80	4.68	4.60	4.76	6.52
Administrative expense:							
Salaries of officials.....	.77	1.10	1.24	1.74	.71	.91	.58
Salaries of office force.....	.58	.84	1.02	.92	1.65	.65	1.00
Rent, general office.....			(a)				
Office expense.....	.22	.31	.11	.32	.72	.14	.39
Insurance, except fire.....	.08	.02	.08	.05	.16	.03	.05
Collection expense.....	.05	.05		.25	.11	.08	.02
Bad debts.....	.09	.35	.48	.23	.56	.05	.46
Taxes.....	.35	.16	.17	.10	.48	.41	.58
Other administrative expense.....	.29	.21	.47	.20	.12	.25	.26
Total.....	2.43	3.04	3.57	3.86	4.51	2.52	3.34
Selling expense:							
Salaries of officials.....	.34	.68	.14	.64	.62	.03	.37
Commission and expense.....	4.16	5.07	3.38	4.17	6.40	2.22	7.65
Wages.....	.69	.44	.09	.29	.86	.32	.54
Rent, show and shipping rooms.....	.02		.32				
Fire insurance.....	.03	.07	.08	.09	.09	.03	.06
Packing cases, etc.....	.43	.78	.07	.44	.53	.71	.56
Cartage and freight outward.....	.35	.60	1.34	.63	1.64	1.64	.22
Advertising.....	.97	.53	.89	1.13	10.15	.03	.87
Other selling expense.....	.30	.07	.43	.06	2.57	.14	.61
Total.....	7.29	8.24	6.74	7.45	22.86	5.12	10.87

a Less than one one-hundredth of 1 per cent.

Group VI is composed of 4 mills making seamless hosiery of cotton and wool mixed, 2 in Illinois and 1 each in Pennsylvania and Maryland; Group VII is composed of 8 mills that spin all or some of their yarns and make seamless hosiery, mostly of wool and cotton mixtures, 4 in New Hampshire and 1 each in Massachusetts, Rhode Island, Michigan, and Wisconsin. Comparing the data for these two groups, it will be seen that in Group VII the percentages for direct labor and indirect labor are considerably larger, while the percentage for materials is much smaller. This is because the materials used by the mills in Group VII are largely cotton and wool instead of yarns, and the labor in these mills includes the labor for spinning, as well as for knitting. In Group VII the percentage for selling expense is considerably larger, owing to a comparatively high percentage for salaries, commissions, and expense of salesmen. In Group VII the percentages for factory expense and administrative expense are somewhat higher.

#### FACTORS IN SUCCESSFUL MANUFACTURING.

Success in the hosiery industry depends largely upon the good judgment of the manufacturer in buying cotton, wool, cotton yarns, woolen yarns, or silk yarns. To some extent luck also is a factor, because materials are often bought far in advance of the manufacture of the product and the delivery of the finished goods, and meanwhile the market prices for the materials may considerably fluctuate. Other factors of success are the possession of sufficient capital, modern equipment, efficient factory management, and efficient selling methods. It is practically impossible to trace statistically the effect of each of these reasons for successful business, but a study of the percentages of the items of cost of the product, based on the net sales, will, at least to some extent, indicate whether the general management of an establishment is efficient.

For good reasons an establishment may have larger proportionate expense than the average for materials, direct labor, and indirect labor. This is somewhat dependent on the quality of the goods that the establishment produces. Many establishments have found it profitable to spend more than the average for selling; that is, to pay higher salaries or commissions to salesmen of unusual ability. The same ratio of expenditure for all items will not be found in any two knitting mills, but if the percentages for many items are much greater than the average of similar establishments, the profit will be smaller or there will be a loss. The lower the percentage of total cost is kept the greater will be the proportion of profit, and a study of the various items of expenditure by any establishment, as compared with those of other establishments or with the average, will, in a measure, show how efficient is the management.

#### ESTABLISHMENTS WITH HIGHEST PERCENTAGES OF PROFIT.

Among the 73 establishments that reported data there were large variations in the percentages of cost of production and the percentages of profit. Of the 73 establishments, 11 made a manufacturing profit of over 10 per cent on net sales and 18 did business at a loss. The percentages of expenditure by the 11 establishments, based on the total manufacturing and selling expense, appear in Table 40.

TABLE 40.—PERCENTAGE OF TOTAL MANUFACTURING AND SELLING EXPENSE FOR SPECIFIED ITEMS IN ESTABLISHMENTS HAVING A MANUFACTURING PROFIT OF 10 PER CENT OR OVER ON NET SALES, COMPARED WITH PERCENTAGES IN ALL ESTABLISHMENTS IN THE SAME GROUPS AND WITH PERCENTAGES IN ALL ESTABLISHMENTS REPORTING DATA.

Items.	73 establishments reporting data, Groups I to VII.	Establishments in Group I.				Average of the 9 establishments in Group I.	Establishment in Group II.	Average of the 16 establishments in Group II.
		No.						
		No. 1.	No. 2.	No. 6.	No. 8.		No. 19.	
Cost of materials, manufacturing and selling.								
Raw material.....	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00
Direct labor:								
Wages.....	52.82	47.80	67.36	55.37	54.14	51.35	54.77	52.99
Paid to contractors.....	24.60	33.54	19.76	28.52	31.01	29.04	26.66	25.11
Total.....	.13					.31		.17
Indirect labor:								
Salaries of officials.....	24.73	33.54	19.76	28.52	31.01	29.35	26.66	25.28
Wages.....								
Total.....	.78	1.39	.88	.71	1.14	.71	1.25	1.24
	3.60	3.42	.79	1.04	3.66	3.70	2.58	2.93
Factory expense:								
Power, light, heat.....	4.38	4.81	1.65	1.75	4.80	4.41	3.83	4.17
Repairs.....								
Depreciation.....	1.42		.13	.51	.81	1.04	1.36	1.33
Fire insurance.....	.72	.62	.30	1.22	.46	.72	.30	.95
Other factory expense.....	2.20	3.37	1.64	3.27	1.94	2.25	2.20	2.94
Total.....	.98	.81	.13	.51	.88	1.00	.89	.72
Administrative expense:								
Salaries of officials.....	5.47	4.80	2.41	5.61	4.25	5.17	5.04	6.28
Salaries of office force.....								
Rent, general office.....	.95	1.39	.27	.17	.29	.77	.31	1.10
Office expense.....	.90	.54	.51	.76	.12	.58	.96	.84
Insurance, except fire.....	.29		.19	.46	.09	.22	.13	.32
Collection expense.....	.07			.01	.03	.08	.03	.02
Bad debts.....	.31	.17	.01	.03	.02	.09		.35

Taxes.	.33	.40	.08	.23	.28	.35	.07	.16
Other administrative expense.	.28	.07	.17	.13	.29	.42	.21	
Total.	3.20	2.83	1.13	1.77	.96	2.43	1.98	3.04
Selling expense:								
Salaries of officials.	.39	1.39	.86	.29	.29	.34	.68	
Commission and expense.	4.78	4.43	3.31	3.82	4.16	5.79	5.37	
Wages.	.06	.20	.18	.11	.02	.39	.44	
Rent, show and shipping rooms.	.06	.02	.11	.01	.03	.10	.07	
Fire insurance.	.46	.22	.77	.18	.43	.76	.66	
Packing expense.	.76	.64	.34	.43	.87	.68	.53	
Cartage, freight outward.	1.84	.40	.13		.30	.07	.07	
Advertising.	.53							
Other selling expense.								
Total.	9.40	6.22	7.69	6.98	4.84	7.29	7.72	8.24
Manufacturing profit <sup>b</sup>	6.66	12.83	11.17	13.32	16.75	8.92	11.08	1.76

<sup>a</sup> Less than one one-hundredth of 1 per cent.

<sup>b</sup> Per cent of net sales.

TABLE 40.—PERCENTAGE OF TOTAL MANUFACTURING AND SELLING EXPENSE FOR SPECIFIED ITEMS IN ESTABLISHMENTS HAVING A MANUFACTURING PROFIT OF 10 PER CENT OR OVER ON NET SALES, COMPARED WITH PERCENTAGES IN ALL ESTABLISHMENTS IN THE SAME GROUPS AND WITH PERCENTAGES IN ALL ESTABLISHMENTS REPORTING DATA—Continued.

Items.	Establishments in Group III.		Average of the 16 establishments in Group III.	Establishments in Group IV.		Average of the 11 establishments in Group IV.	Establishment in Group V. No. 61.	Average of the 9 establishments in Group V.	Establishment in Group VII. No. 72.	Average of the 8 establishments in Group VII.
	No. 33.	No. 39.		No. 42.	No. 51.					
Cost of materials, manufacturing and selling.....	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00
Raw material.....	47.78	55.91	58.52	28.08	54.64	51.89	45.93	46.85	48.85	47.51
Direct labor:										
Wages.....	28.11	25.27	21.22	37.71	21.18	28.78	17.94	17.76	24.10	25.75
Paid to contractors.....						.18				
Total.....	28.11	25.27	21.22	37.71	21.18	28.96	17.94	17.76	24.10	25.75
Indirect labor:										
Salaries of officials.....	1.18	1.16	.61	7.46	1.11	1.13	.84	.92	.60	.57
Wages.....	3.31	1.71	3.54	5.31	1.98	4.03	1.87	2.41	2.94	5.44
Total.....	4.49	2.87	4.15	12.77	3.09	5.16	2.71	3.33	3.54	6.01
Factory expense:										
Power, light, heat.....	2.90	1.60	1.34	.24	.19	1.05	1.31	1.60	1.29	2.63
Repairs.....	1.93	.03	.54	.77	.39	.73	.66	.90	.53	.75
Depreciation.....	3.40	2.38	2.78	3.19	1.40	2.03	1.19	1.67	.89	1.37
Life insurance.....	.45	.86	.19	1.27	.22	.24	.07	.19	.20	.14
Other factory expense.....	2.14	.80	.96	1.05	.24	.63	.25	.33	.67	1.63
Total.....	10.83	5.17	5.80	6.82	2.44	4.68	3.48	4.69	3.61	6.52
Administrative expense:										
Salaries of officials.....	1.18	1.90	1.24	2.69	1.11	1.74	.18	.71	.66	.58
Salaries of office force.....	1.32		1.02		1.10	.92	1.89	1.65	1.33	1.00
Rent of office.....			(*)							
Office expense.....	.87		.11		.68	.32	.81	.72	.44	.39
Insurance, except fire.....		.06	.08	.19	.08	.26	.16	.16	.06	.05
Collection expense.....					.39	.26	.02	.11	.06	.02
Bad debts.....		.11	.43	1.94	.36	.28	.43	.56	.58	.46

Taxes.....	.28	.02	.17	.27	.15	.10	.56	.48	.74	.58
Other administrative expense.....	.84	.40	.47	.36	.53	.20		.12	.18	.26
Total.....	3.99	2.39	3.57	6.08	4.86	3.86	4.05	4.51	3.95	3.34
Selling expense:										
Salaries of officials.....	1.18	1.90	1.24	2.69	1.11	1.74	.18	.71	.66	.58
Commission and expense.....	2.51	4.90	3.33	3.96	7.14	4.17	5.97	6.40	11.96	7.65
Wages.....	.20	.34	.08	.26	.18	.09	.05	.09	.04	.05
Rent, show and shipping rooms.....	.97		.07	.45	.39	.44	.58	.83	.19	.33
Packing cases, etc.....		2.75	1.34	1.04	.70	.48	1.70	1.34	1.11	.83
Cartage, freight outward.....			.89	1.04	3.92	1.13	14.07	10.15	1.92	.22
Advertising.....	1.07	.40	.48	.36		.06	2.42	2.57	.19	.61
Other selling expense.....										
Total.....	4.75	8.39	6.74	10.84	13.79	7.45	25.89	22.86	15.95	10.87
Manufacturing profit <sup>b</sup> .....	13.23	19.91	7.60	15.12	11.19	3.83	10.11	6.56	12.69	7.08

<sup>a</sup> Less than one one-hundredth of 1 per cent.

<sup>b</sup> Per cent of net sales.



It will be observed that the 11 establishments which had a manufacturing profit of 10 per cent or more included one or more establishments in each of the seven groups, except Group VI, composed of 4 mills knitting seamless cotton hosiery of wool and cotton mixtures, located in the East, West, and South.

Four of these 11 establishments, Nos. 1, 2, 6, and 8, were in Group I, composed of 9 mills in the East and West knitting full-fashioned hose, or both full-fashioned and seamless hose, made of silk or silk and cotton mixed.

One establishment, No. 19, was in Group II, composed of 16 mills, 15 in Pennsylvania and 1 in New York, making seamless cotton hosiery.

Two establishments, Nos. 33 and 39, were in Group III, composed of 16 mills in the South making seamless cotton hosiery.

Two establishments, Nos. 42 and 51, were in Group IV, composed of 11 mills, all in Pennsylvania, making seamless hosiery of cotton and silk mixed.

One establishment, No. 61, was in Group V, composed of 9 mills, all in the West, making seamless hosiery of cotton and silk mixed.

One establishment, No. 72, was in Group VII, composed of 8 mills, in the East and West, making seamless hosiery of cotton and wool mixed.

Of the 11 establishments with a manufacturing profit of over 10 per cent, shown in the table, the percentages for materials of 5 were less than those of their respective groups and those of 5 were less than the general average of the 73 establishments reporting.

The percentage of establishment No. 2 was about 16 per cent more than the average for Group I and about 15 per cent more than the average for all establishments reporting (Groups I to VII). This is because the materials used by this establishment were silk. The percentage for material being high, necessarily reduces the percentages for other items of cost and largely accounts for the low percentage of the cost of direct labor. This will be better understood, perhaps, by a simple illustration. Suppose, for instance, that the cost of materials are 50 per cent of the total cost of goods manufactured, the labor cost 20 per cent, and all other costs 30 per cent; but if the establishment uses expensive materials, making the cost of materials 60 per cent, then, if the relation between labor and other costs than for materials should remain unchanged, the labor cost would be reduced from 20 to 16 per cent and the cost for other items than for materials would be reduced from 30 to 24 per cent.

#### PROFITS NOT DEPENDENT ON LOW LABOR COST.

Of the 11 establishments with a manufacturing profit of over 10 per cent, the percentages for direct labor of 4 were less than those of their respective groups and those of 4 were less than the general average.

The percentage for direct labor varied from 17.94 (No. 61) to 37.71 (No. 42). It does not follow that because an establishment had a higher proportion of expenditure for labor than other establishments it had less profits. This is strikingly shown by establishment No. 42, whose percentage for labor, 37.71, was considerably higher than the percentage, 26.96, for Group IV, to which it belongs, or to the percentage, 24.73, for all establishments reporting (Groups I to VII);

and yet of all of the 73 establishments it had the third highest manufacturing profit, 15.12 per cent on its net sales.

The low percentage, 17.94, of establishment No. 61 for direct labor is largely accounted for by this establishment's unusually high percentage, 25.89, for selling expense, which was due mostly to the exceptionally high percentage for advertising, 14.07. As the total is 100 per cent, if one percentage is unusually high some other percentage must necessarily be correspondingly lower.

It should not be assumed that an establishment whose proportion of expenditure for labor was lower than that of other establishments paid less to its employees than did the others. On the contrary, the earnings of individual employees might even be greater in the establishment with a low percentage of labor cost, because of several reasons—(a) the fact that the employees were more skilled than ordinary employees; (b) better superintendence or superior shop arrangements enabled them to turn out a larger product per worker than could be done by workers in factories less efficiently managed; (c) more expensive materials were used in the goods manufactured; (d) overhead expenses were relatively high.

Of the 11 establishments with a manufacturing profit of over 10 per cent, the percentages for indirect labor of 7 were less than those of their respective groups and those of 7 were less than the general average.

The percentages for factory expense of 8 establishments were less than those of their respective groups, and those of 8 were less than the general average.

The percentages for administrative expense of 7 establishments were less than those of their respective groups and those of 6 were less than the general average.

The percentages for selling expense of 5 establishments were less than those of their respective groups and those of 7 were less than the general average.

#### ESTABLISHMENTS OPERATING AT A LOSS.

The data regarding the 18 establishments that did business at a loss appear in Table 41.

TABLE 41.—PERCENTAGE OF TOTAL MANUFACTURING AND SELLING EXPENSE FOR SPECIFIED ITEMS IN ESTABLISHMENTS HAVING A MANUFACTURING LOSS ON NET SALES, COMPARED WITH PERCENTAGES IN ALL ESTABLISHMENTS IN THE SAME GROUPS AND WITH PERCENTAGES IN ALL ESTABLISHMENTS REPORTING DATA.

Items.	73 establishments reporting manufacturing loss in Groups I to VII.	Establishment in Group I, No. 5.	Average of the 9 establishments in Group I.	Establishments in Group II.				Average of the 16 establishments in Group II.	Establishments in Group III.				Average of the 16 establishments in Group III.
				No. 11.	No. 15.	No. 17.	No. 21.	No. 23.	No. 26.	No. 29.	No. 34.	No. 36.	
Cost of materials, manufacturing, and selling.....	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00
Raw material.....	52.82	56.96	51.35	45.06	49.60	63.03	59.53	54.64	52.99	52.50	57.47	52.81	58.52
Direct labor:													
Wages.....	24.60	24.62	23.04	30.95	27.87	21.89	20.23	23.41	25.11	22.11	25.68	25.83	21.22
Paid to contractors.....	.13		.31						.17				
Total.....	24.73	24.62	23.35	30.95	27.87	21.89	20.23	23.41	25.28	22.11	25.68	25.83	21.22
Indirect labor:													
Salary of officials.....	.78	.64	.71	1.48	2.55	1.40	1.53	1.28	1.24	.38	.60	.60	.61
Wages.....	3.60	5.12	3.70	2.43	4.38	2.02	4.54	.67	2.92	5.49	5.78	5.09	3.54
Total.....	4.38	5.76	4.41	3.91	6.93	3.42	6.07	1.95	4.17	5.49	5.78	5.09	4.15
Factory expense:													
Power, heat, light.....	1.42	1.18	1.04	.14	.19	.84	.52	1.78	1.33	2.43	.72	.71	1.34
Repairs.....	.72	.32	.72	.92	.60	.51	2.32	1.33	1.45	1.45	.77	.90	.54
Depreciation.....	2.20	5.04	2.25	5.49	3.14	3.24	3.67	3.18	2.94	5.28	3.81	2.97	1.47
Fire insurance.....	.20	.09	.16	.78	.75	.65	.71	.36	.34	.56	.96	.15	.26
Other factory expense.....	.93	.67	1.00	.93	.80	1.43	.40	(e)	.72	.84	1.03	.31	.95
Total.....	5.47	7.30	5.17	8.26	5.48	6.67	7.62	6.55	6.28	10.96	6.79	5.31	5.80
Administrative expense:													
Salaries of officials.....	.95	.64	.77	.74	1.27	.70	.89	1.28	1.10	4.06	.39	2.08	.83
Repairs.....	.90	.59	.58		.80	.39	.97	1.03	.84		.13	.83	1.24
Office expense.....	(a)												(e)
Insurance, except fire.....	.29	.11	.22	.45	.08	.21	.17	.20	.31	.04	.11	.14	.11
Collection expense.....	.07		.03		.03	.02	.01		.02			.11	.08
Bad debts.....	.31	.17	.09	.57	.17		.08	.07	.35			.15	.45

Items.	73 establishments reporting manufacturing loss in Groups I to VII.	Establishment in Group I, No. 5.	Average of the 9 establishments in Group I.	Establishments in Group II.				Average of the 16 establishments in Group II.	Establishments in Group III.				Average of the 16 establishments in Group III.
				No. 11.	No. 15.	No. 17.	No. 21.	No. 23.	No. 26.	No. 29.	No. 34.	No. 36.	
Taxes.....	.33		.35	.16	.17	.06	.15		.16	.42	.45	.09	.17
Other administrative expense.....	.28	.99	.29	.63		1.03	.20	.36	.21		.51	.30	.47
Total.....	3.20	2.50	2.43	2.55	3.05	2.41	2.47	2.94	3.04	4.48	3.07	2.41	3.57
Selling expense:													
Salaries of officials.....	.39	.64	.34	.74	1.27	.70	.89	1.28	.68	1.73	.39	.27	.14
Commission and expense.....	4.50	1.56	4.16	5.10	4.48	.85	1.56	1.08	5.07	1.30	1.98	2.13	3.38
Wages.....	.50	.26	.69	1.04	1.46		.54	.71	.44				.09
Repairs.....	.06	.03	.02	.05	.11				.07	.45	.05	.11	.32
Fire insurance.....	.06	.03	.03	.08	.83		.58	.78	.78				.08
Packing cases, etc.....	.46	.23	.43	1.06	.59		.59	.64	.60	.56	.40	.06	.07
Cartage, freight outward.....	.76	.23	.37		2.25		.20	.12	.53	.42	.10	.30	.89
Advertising.....	1.54	.97	.90			1.03	.20		.07				.43
Other selling expense.....	.55		.30										
Total.....	9.40	2.86	7.29	9.27	7.07	2.68	3.78	4.41	8.24	4.46	3.34	3.76	6.74
Manufacturing loss <sup>b</sup> .....	16.66	4.59	8.92	1.04	.11	5.35	5.60	2.47	1.76	2.72	8.28	4.83	7.60

<sup>a</sup> Less than one one-hundredth of 1 per cent.

<sup>b</sup> Per cent of net sales.

<sup>c</sup> Profit.

TABLE 41.—PERCENTAGE OF TOTAL MANUFACTURING AND SELLING EXPENSE FOR SPECIFIED ITEMS IN ESTABLISHMENTS HAVING A MANUFACTURING LOSS ON NET SALES, COMPARED WITH PERCENTAGES IN ALL ESTABLISHMENTS IN THE SAME GROUPS AND WITH PERCENTAGES IN ALL ESTABLISHMENTS REPORTING DATA—Continued.

Items.	Establishments in Group IV.		Average of the 11 establishments in Group IV.	Establishments in Group V.		Average of the 9 establishments in Group V.	Establishments in Group VII.			Average of the 8 establishments in Group VII.
	No. 44.	No. 52.		No. 53.	No. 54.		No. 60.	No. 66.	No. 70.	
	Cost of materials, manufacturing, and selling.....	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00
Raw material.....	42.29	51.56	51.89	52.92	44.26	47.77	46.85	34.54	50.09	47.51
Direct labor:										
Wages.....	29.02	27.00	26.78	28.06	25.87	12.77	17.76	37.08	42.23	25.88
Paid to contractors.....	5.94		.18							
Total.....	34.96	27.00	26.96	28.06	25.87	12.77	17.76	37.08	42.23	25.75
Indirect labor:										
Salaries of officials.....	1.34	4.44	1.13	2.22		.42	.92	.86	.76	.57
Wages.....	3.35	5.92	4.03	2.89	4.15	2.45	2.41	1.76	3.86	5.44
Total.....	4.69	6.36	5.16	5.11	4.15	2.87	3.33	2.62	4.62	6.01
Factory expense:										
Power, heat, light.....										
Repairs.....	1.39	1.05	1.05	2.35	1.35	1.32	1.60	6.64	2.98	2.63
Depreciation.....	1.23	3.38	.73	.67	.65	.69	.90	.49	1.02	.94
Fire insurance.....	3.46	2.03	2.33	4.05	4.40	1.77	1.67	2.38	1.45	1.37
Other factory expense.....	.77	1.15	.58	.59	.57	.32	.22	.32	.31	.14
Total.....	3.6	1.36	.63	.10	.07	.33	.33	3.08	1.80	1.63
Administrative expense:										
Salaries of officials.....	5.82	4.24	4.08	7.75	7.56	4.08	4.69	12.91	8.16	6.52
Salaries of office force.....	2.04	2.18	1.74	1.11		1.69	.71	.86	.76	.58
Rent, general office.....	.68	1.06	.92		2.88	1.13	1.65		1.47	1.00
Office expense.....										
Insurance, except fire.....	.26	.18	.32	.61	.87	.08	.72	.38	.31	.39
Collection expense.....	.06	.05	.83	.06	.17	.16	.08	.02	.08	.05
Bad debts.....	.99	.07	.25	.06	.45	.11	.05	.07	.09	.46

Taxes.....	.10	.05	.10	.17	.13	.48	.48	.15	.31	.36	.58
Other administrative expense.....	.24		.20		.44	.13	.12		.85	.67	.26
Total.....	4.31	3.62	3.86	2.72	4.99	5.69	4.51	1.48	4.12	3.76	3.34
Selling expense:											
Salaries of officials.....	2.04	5.59	.64	2.22		4.2	.62	.86	.76	.47	.37
Commission and expense.....	3.25	4.32	4.17		6.06	8.67	6.40	10.16	2.52	2.87	7.55
Freight.....	.39	.29	.29		1.50	1.39	.86		.57		.54
Rent, show and shipping rooms.....				.25	.54	.13	.09		.09	.36	.05
Fire insurance.....				.60	.60	.30	.53		1.21	.89	.56
Packing cases, etc.....		.57	.64	.95	.81	1.60	1.64		.62	.47	.22
Cartage, freight outward.....	.94	.47	.63	.02	.86	8.35	10.15				.27
Advertising.....		.98	1.13		3.66	5.96	2.57		.86		.61
Other selling expense.....	1.31		.06								
Total.....	7.93	7.22	7.45	3.44	13.17	26.82	22.86	11.02	6.33	5.03	10.87
Manufacturing loss <sup>b</sup> .....	1.00	3.21	3.83	13.10	4.54	2.28	6.56	2.86	1.12	9.58	7.08

<sup>a</sup> Less than one one-hundredth of 1 per cent.

<sup>b</sup> Per cent of net sales.

<sup>c</sup> Profit.

Of the 18 establishments having manufacturing losses of from 0.11 to 13.1 per cent, the percentages for materials of 7 were higher than those of their respective groups and those of 7 were higher than the general average.

The percentages for direct labor of 13 of these 18 establishments were higher than those of their respective groups and those of 13 were higher than the general average. It is noticeable that the percentage of loss of establishment No. 68 was 1.12 and the percentage of loss of establishment No. 60 was 2.28, and yet the percentage for direct labor of No. 68 was 42.23, the highest shown in the table, while No. 60 had a percentage for direct labor of only 12.77. This further illustrates that the percentage of profit or loss is not dependent on labor.

The percentages for indirect labor of 11 of the 18 establishments were higher than those of their respective groups and those of 12 were higher than the general average.

The percentages for factory expense of 14 of the 18 establishments were higher than those of their respective groups and those of 15 were higher than the general average.

The percentages for administrative expense of 8 of the 18 establishments were higher than those of their respective groups and those of 7 were higher than those of the general average.

The percentages for selling expense of 4 of the 18 establishments were higher than those of their respective groups and those of 3 were higher than those of the general average.

#### DIRECT AND INDIRECT LABOR COMBINED.

Table 42 resembles Table 31 in that it shows, by groups, the average net sales and profits, but it gives the average items of expense without classification under direct labor, indirect labor, factory expense, administrative expense, and selling expense. In this table direct labor and indirect labor, except salaries of officials, are entered as labor. The items for salaries of all officials under the heads of indirect labor, cost of administration, and cost to sell are combined, and in the same way the items for rent and also the items for fire insurance are combined. The salaries of clerks in the office and the office expenses for stationery, etc., are put together.

In Table 43 the items of cost are similarly arranged as in the last table, but these items are given in the form of percentages, which are based on the total manufacturing and selling expense and not on net sales.

#### COST AND PROFIT BY ESTABLISHMENTS.

TABLE 42.—AVERAGE COST OF SPECIFIED ITEMS OF EXPENSE, AND PROFIT OR LOSS, BASED ON NET SALES, BY GROUPS AND COMBINATIONS OF GROUPS OF ESTABLISHMENTS.

Items.	All establishments reporting (Groups I to VII.)	All establishments reporting (Groups I to VII.)	All establishments reporting (Groups I to VII.)	Establishments buying all yarns and making—						Establishments spinning and making seamless hosiery (East and West), Group VII.
				Seamless hosiery, Groups II to VI.	Full-fashioned or both full-fashioned and seamless hosiery (East and West), Group I.	Seamless cotton hosiery (Pennsylvania and New York), Group II.	Seamless cotton hosiery, (Canada and Ontario), Group III.	Seamless cotton and silk hosiery, (Ontario and Quebec), Group IV.	Seamless cotton and silk hosiery, (West and South), Group V.	Seamless wool and cotton hosiery, (East and West), Group VI.
Number of establishments.....	73	64	56	16	16	16	16	11	9	4
Net sales.....	\$370,012	\$281,433	\$246,692	\$162,685	\$999,909	\$284,944	\$228,890	\$236,142	\$304,639	\$324,618
Raw material.....	172,820	138,364	127,185	82,775	418,727	142,466	118,940	133,198	232,846	216,020
Salaries of officials.....	94,406	69,000	58,196	44,748	275,075	100,504	71,710	59,806	61,961	144,031
Commission and expense of salesmen.....	6,962	5,852	5,092	4,724	14,853	4,826	8,039	6,390	5,000	6,978
Rent.....	15,666	13,069	9,987	7,922	33,917	8,234	9,554	18,197	7,982	34,883
Power, heat, light.....	193	197	228	159	159	790	2,401	2,401	3,788	12,008
Repairs.....	4,657	4,125	2,999	2,470	8,441	3,700	2,684	2,684	3,400	12,008
Bad debts.....	2,171	1,919	1,520	1,490	18,367	6,771	4,692	4,739	6,482	6,251
Insurance.....	7,888	5,732	5,712	4,637	1,587	6,560	7,581	4,739	8,900	918
Insurance, except fire.....	233	173	168	28	664	202	110	458	95	209
Packing cases, etc.....	1,495	1,212	1,018	1,220	3,512	1,664	1,010	1,466	2,568	2,568
Cartage, freight outward.....	2,502	2,450	2,659	1,937	2,872	3,262	1,454	4,673	5,913	987
Salaries of clerks and office expenses.....	3,906	3,940	3,142	1,498	6,514	2,740	2,441	6,304	5,913	6,92
Collection expense.....	1,003	1,000	892	551	736	1,170	653	1,099	1,468	2,074
Travel.....	1,074	1,822	560	2,964	2,964	422	224	1,362	1,468	2,633
Advertising.....	6,014	5,751	6,007	7,884	7,884	835	2,579	28,849	100	3,858
All other expense.....	5,757	4,740	3,785	1,561	12,995	4,523	2,022	8,589	3,780	11,418
Total manufacturing and selling.....	327,414	258,784	230,616	156,220	815,432	243,453	223,212	284,309	339,899	455,963
Cost of goods purchased.....	24,055	11,899	10,757	7,416	110,500	26,645	400	5,800	19,892	19,892
Deduct increase in stock of goods.....	6,084	4,706	7,145	3,817	15,248	6,810	8,526	13,498	3,698	11,617
Add decrease in stock of goods.....	345,385	265,887	234,228	159,819	790,704	233,288	221,086	276,701	356,201	487,502
Cost of goods sold.....	24,697	15,406	12,414	2,805	80,205	21,636	8,804	19,441	8,458	37,116
Manufacturing profit.....	86	98	113	394	.....	.....	.....	.....	.....	.....
Miscellaneous income (add to profit, deduct from loss).....	3,786	3,015	3,072	3,760	9,057	2,955	1,205	4,485	2,745	2,890
Interest paid on current loans (deduct from profit, add to loss).....	20,927	12,999	9,505	5,500	80,148	18,701	7,599	14,946	5,713	34,236
Final profit.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....

<sup>a</sup> Loss.



TABLE 43.—PERCENTAGES OF SPECIFIED ITEMS OF EXPENSE, BASED ON THE TOTAL MANUFACTURING AND SELLING EXPENSE, BY GROUPS AND COMBINATIONS OF GROUPS OF ESTABLISHMENTS.

Items.	Establishments buying all yarns and making—										Establishments spinning yarn and making seamless hosiery (East and West), Group VII.
	All establishments reporting data, Groups I to VII	All establishments making seamless hosiery, Groups II to VII.	Seamless hosiery, Groups II to VI.	Full-fashioned or both full-fashioned and seamless hosiery (East and West), Group I.	Seamless cotton hosiery (Pennsylvania and New York), Group II.	Seamless cotton hosiery (South), Group III.	Seamless cotton and silk hosiery (Pennsylvania), Group IV.	Seamless cotton hosiery (West), Group V.	Seamless wool and cotton hosiery (East, West, and South), Group VI.		
Number of establishments	73	64	56	9	16	16	11	9	4	8	
Total manufacturing and selling	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	
Raw material	52.82	53.47	55.15	51.35	52.99	58.52	51.89	46.85	70.25	47.51	
Labor	28.83	26.66	25.24	33.74	28.65	24.85	31.26	21.03	17.22	31.73	
Salaries of officials	2.12	2.26	2.47	1.82	3.02	1.90	3.51	2.25	1.39	1.52	
Commission and expense of salesmen	4.78	5.06	4.33	4.16	5.07	3.38	4.17	6.40	2.22	7.65	
Freight	1.06	1.08	1.10	1.02	1.32	1.34	1.05	1.60	1.05	2.95	
Heat and light	1.42	1.59	1.30	1.04	1.33	1.54	1.05	1.60	1.05	2.63	
Repairs	1.72	1.72	1.72	1.72	1.83	1.84	1.83	1.87	2.36	2.37	
Depreciation	2.20	2.17	2.40	2.25	2.94	2.78	2.03	1.67	2.36	1.37	
Fire insurance	.26	.28	.31	.19	.41	.27	.33	.28	.26	.19	
Insurance, other	.07	.07	.07	.08	.02	.08	.05	.16	.03	.05	
Packing cases	.46	.47	.44	.43	.60	.54	.44	1.64	1.64	2.22	
Freight and freight outward	1.76	1.95	1.15	.35	1.60	1.34	1.63	1.67	1.64	1.79	
Salaries of clerks and office expense	1.19	1.37	1.36	.80	1.15	1.13	1.24	2.37	.79	1.39	
Collection expense	.07	.07	.09	.05	.05	.....	.25	.11	.08	.02	
Bad debts	.31	.40	.39	.09	.35	.48	.28	.56	.05	.46	
Taxes	.33	.32	.24	.35	.16	.17	.10	.48	.03	.58	
Advertising	1.84	2.22	2.60	.97	1.53	.89	1.13	3.02	1.05	2.50	
All other expense	1.76	1.53	1.64	1.59	1.00	1.85	.89	1.05	1.05	2.50	

By Table 43 it will be seen that the principal percentages of the items of cost of the product of all establishments reporting data (Groups I to VII) were, in the order of the size of the percentages, raw materials, 52.82; labor, 28.83; salaries, commissions, and expense of salesmen, 4.78; depreciation, 2.20; salaries of officials, 2.12; and advertising, 1.84.

Group I, composed of establishments making full-fashioned hosiery, East and West, had the highest percentage for labor of any group, 33.74, but its percentages for most other items were lower than the average.

Group VI, composed of establishments in the East, West, and South making seamless hosiery of wool and cotton mixed, had the lowest percentage for labor of any group, 17.22, which is explained by the fact that the percentage for materials was far above the average.

Group V, composed of establishments in the West making seamless hosiery of cotton and silk mixtures, had the lowest percentage for materials, principally because the percentages for salaries, commissions, and expense of salesmen, for salaries of clerks and office expense, for advertising (which was especially large), and for other items of expense were larger than the average.

Group VII, composed of establishments in the East and West spinning all or part of their yarns and making seamless hosiery, mostly of wool and cotton mixed, had a low percentage for materials because of the purchase of wool and cotton instead of yarns.

## LABOR COST AND IMPORT DUTIES.

As shown by Table 43, the average labor cost, based on total manufacturing and selling expense, varied from 17.22 per cent in Group VI to 33.74 per cent in Group I, the average for the 73 establishments reporting, Groups I to VII, being 28.83 per cent.

From October 4, 1913, to June 30, 1914, the period from the date when the Underwood-Simmons act became effective to a month before the war in Europe began, the imports of cotton hosiery for consumption amounted to \$2,561,301. The duty paid on such imports amounted to \$1,142,404, or an average rate of 44.60.

Under the new tariff the ad valorem rate of duty on silk knit goods is 50 per cent ad valorem, and on knit wearing apparel composed in chief value of wool is 35 per cent.

## WAGES AND COST OF MATERIALS.

Table 44 shows the per cent of the total expenses of manufacturing expended for salaries, wages, materials, and miscellaneous expenses, as reported by the Census of Manufactures of 1909 for the hosiery and knit-goods industries.

TABLE 44.—PER CENT OF TOTAL EXPENSES REPORTED FOR THE HOSIERY AND KNIT-GOODS INDUSTRIES, 1909.

[Thirteenth Census, Manufactures, Vol. X, p. 75.]

States.	Salaries.	Wages.	Cost of materials.	Miscellaneous expenses.
Alabama.....	5.5	24.4	61.7	8.3
California.....	14.5	25.7	45.8	14.0
Connecticut.....	6.2	26.1	58.3	9.4
Delaware.....	3.0	24.6	66.0	2.5
Georgia.....	5.2	24.2	62.9	7.7
Illinois.....	4.5	22.6	65.4	7.5
Indiana.....	9.3	30.0	48.0	6.7
Iowa.....	8.1	25.8	51.1	15.1
Maine.....	9.9	22.4	49.8	17.9
Maryland.....	2.8	22.4	66.7	8.2
Massachusetts.....	4.2	31.4	56.7	7.7
Michigan.....	9.3	22.1	58.8	9.8
Minnesota.....	10.4	19.4	60.6	9.5
New Hampshire.....	2.3	27.5	63.4	6.8
New Jersey.....	6.9	29.6	59.9	3.6
New York.....	3.4	24.8	64.7	7.0
North Carolina.....	4.1	24.0	67.0	4.9
Ohio.....	6.8	18.6	66.8	7.8
Pennsylvania.....	3.8	20.8	62.0	7.4
Rhode Island.....	4.4	18.8	72.3	4.6
South Carolina.....	4.5	20.3	64.9	11.3
Tennessee.....	3.8	22.2	67.9	9.1
Utah.....	7.2	13.5	74.9	4.4
Vermont.....	2.7	24.8	65.9	6.6
Virginia.....	3.9	22.7	66.1	7.3
Wisconsin.....	7.6	23.6	58.0	10.8
All other States.....	7.1	34.1	51.4	7.4
United States.....	4.4	25.5	62.7	7.4

The following comment on the table appears in the census report:

The differences among the States with respect to the proportions which the cost of materials and wages, respectively, formed of the total reported expenses are attributable largely to differences in the character of materials used and to differences in the degree of fineness and elaboration of the products. The cost of materials is likely to form a smaller proportion and wages a higher proportion of the total expenses in establishments which do their own spinning than in establishments that buy the yarn which they use for knitting.

The percentage that the cost of materials formed of the total expenses reported varies considerably in the different States, being highest in Utah (74.9) and Rhode Island (72.3) and lowest in California (45.8), Indiana (48), and Maine (49.8). For New York the percentage was 64.7; for Pennsylvania, 62; and for Massachusetts, 56.7. In Massachusetts the mills use relatively more raw cotton and less purchased cotton yarn than in Pennsylvania and New York.

Table 44, from the census report, is not exactly comparable with Table 43, because the former covers both the hosiery and knit-goods industries, while the latter was compiled from data regarding hosiery mills only; and also because in the former the total expense of the year 1909 was the base, and in the latter the net sales during the last business year, 1913 in most cases, was the base. These differences in mind, it is of interest to compare this census table with Table 43. It appears that in the latter table the percentages for salaries, wages, or labor, and material are lower.

#### CONDITIONS UNDER TARIFF ACTS OF 1897 AND 1909.

The Dingley Tariff Act became operative July 24, 1897, and remained in effect until August 4, 1909, when the Payne-Aldrich Tariff Act went into effect. Table 45 shows the amount of cotton

hosiery imported for consumption in the United States during the last full fiscal year under the Dingley law and the amount during the first full fiscal year under the Payne-Aldrich law, together with the duty paid thereon and the average ad valorem equivalent rate.

TABLE 45.—IMPORTS OF COTTON HOSIERY FOR CONSUMPTION IN THE UNITED STATES DURING THE FISCAL YEARS 1909 AND 1911.

Fiscal year ending June 30—	Dozen pairs.	Value.	Duty collected.	Average ad valorem equivalent rate.
1909.....	5,068,002	\$6,390,921	\$3,860,418	60.40
1911.....	2,933,129	3,824,968	2,803,950	73.31

The National Association of Hosiery and Underwear Manufacturers was dissatisfied with the rates of duty on cotton hosiery which were provided under the Dingley Act, and which, as shown by this table, averaged 60.40 per cent. The tariff committee of the association, in petitioning the Committee on Ways and Means of the House of Representatives for increased rates of duty, stated near the end of 1908 that the cotton-hosiery industry was in a "desperate condition." The following is quoted from the petition:<sup>a</sup>

THE NATIONAL ASSOCIATION OF HOSIERY AND UNDERWEAR MANUFACTURERS ASKS FOR MORE DUTY ON COTTON HOSIERY.

PHILADELPHIA, PA., November 30, 1908.

HON. SERENO E. PAYNE,  
Chairman Ways and Means Committee.

SIR: The National Association of Hosiery and Underwear Manufacturers, an organization representing 75 per cent of American manufacturers of hosiery, through its tariff committee most respectfully begs to submit for your consideration the following facts and statistics to substantiate their claim for an increase in the present tariff rates on cotton hosiery.

\* \* \* \* \*

As evidence of the needs of the hosiery craft for additional protection, we would submit for your consideration the following comparative costs of four prominent and leading articles of staple hosiery. We have selected these four qualities for the reason they are the principal items of hosiery imported, representing a greater per cent of the total imports than any others; they are also the most popular articles of consumption.

\* \* \* \* \*

A careful census of the hosiery mills of this country shows the desperate condition of this craft; almost without exception, a week not exceeding four days is prevailing and in many cases three days a week is the true state of affairs. You therefore can readily understand the serious necessities of the industry, due entirely to the low cost of labor and materials in Germany, the keenest competitor for American cotton-hosiery trade.

\* \* \* \* \*

How soon will the Japanese with their frightfully low wages, even in comparison with those of Germany, the high-grade skill of their working people, and with the effective help of their Government, be competing with American labor?

The hosiery craft would earnestly engage the attention of the committee to this probability, for if Japan continues to advance in manufacturing in the next five years

<sup>a</sup> This petition was presented to the Committee on Ways and Means on Dec. 12, 1908. See tariff hearings before the Committee on Ways and Means of the House of Representatives, 60th Cong., 1908-9, Schedule I, Cotton and Manufactures of, pp. 4593-4607.

at the same ratio as she has in the last five, American hosiery wage earners will be confronted with a condition far more serious than that which faces them to-day with the low cost of labor and production of hosiery in Germany.

Most respectfully submitted.

William L. Waring, chairman, 72 Leonard Street, New York City; George D. Horst, of The Nolde-Horst Company, Reading, Pa.; Thos. E. Brown, of Brown Knitting Company, Philadelphia, Pa.; W. Park Moore, of Brown-Aberle Company, Philadelphia, Pa.; Jos. S. Rambo, of Rambo & Regar, Inc., Norristown, Pa.; A. H. Sulloway, of Sulloway Mills, Franklin, N. H.; Julian S. Carr, Durham, N. C.; Garnett Andrews, of Richmond Hosiery Mills, Chattanooga, Tenn.

In considering the statements in this petition that the hosiery industry was in a desperate condition in 1908 as a result of inadequate protection under the Dingley law, attention may be given to Tables 46 and 47, which show census statistics for the years 1899 to 1909, covering most of the years that the Dingley law was in force, 1897 to 1909.

TABLE 46.—DEVELOPMENT OF THE HOSIERY AND KNIT-GOODS INDUSTRIES IN THE UNITED STATES, 1899 TO 1909.

[Thirteenth Census, Manufactures, Vol. X, p. 67.]

Items.	Number or amount.			Per cent of increase.		
	1909	1904	1899	1899-1909	1904-1909	1899-1904
Number of establishments.....	1,374	1,144	1,006	36.6	20.1	13.7
Salaried employees.....	5,721	4,390	2,831	102.1	32.1	52.9
Wage earners (average number).....	129,275	104,092	83,691	54.5	24.2	24.4
Primary horsepower.....	103,709	78,769	57,346	80.8	31.7	37.4
Capital.....	\$163,641,171	\$106,943,072	\$82,065,517	99.4	53.0	30.3
Expenses.....	175,729,533	123,276,675	85,395,967	108.8	42.5	44.4
Services.....	52,431,680	36,069,758	27,572,657	90.2	45.4	30.3
Salaries.....	7,691,457	4,455,151	3,138,160	145.1	72.6	42.0
Wages.....	44,740,223	31,614,607	24,434,497	83.1	41.5	29.4
Materials.....	110,241,053	76,789,348	51,195,330	115.3	43.6	50.0
Miscellaneous.....	13,056,850	10,417,569	6,627,380	97.0	25.3	57.2
Value of products.....	200,148,527	137,076,454	95,883,692	108.8	46.0	43.0
Value added by manufacture (value of products less cost of materials).....	89,902,474	60,287,106	44,638,362	101.4	49.1	35.1

TABLE 47.—VALUE OF HOSIERY PRODUCED IN THE UNITED STATES, 1899 TO 1909

[Thirteenth Census, Manufactures, Vol. X, p. 79.]

Items.	Value.			Per cent of increase.		
	1909	1904	1899	1899-1909	1904-1909	1899-1904
Value of product.....	\$68,721,825	\$44,113,260	\$27,420,029	150.6	55.8	60.9
Cotton.....	55,909,987	34,586,629	21,182,677	163.9	61.7	63.3
Merino or mixed.....	4,766,195	3,396,842	2,044,723	133.1	40.3	66.1
Woolen or worsted.....	4,445,227	5,007,486	4,006,216	11.0	20.7	40.0
Silk.....	3,600,416	522,309	186,413	1,831.4	599.3	180.2

<sup>a</sup> Decrease.

The National Association of Hosiery and Underwear Manufacturers apprehended that within five years from 1908 the competition from Japan would be "far more serious" to American hosiery manufacturers than the competition that they then had from Germany. Table 48, which gives statistics of imports of cotton hosiery from Japan, will show what has been the extent of this competition.

TABLE 48.—IMPORTS OF COTTON HOSIERY FROM JAPAN INTO THE UNITED STATES BY FISCAL YEARS, 1907 TO 1914.

Fiscal years.	Value.	Fiscal years.	Value.
1907.....	<sup>a</sup> \$446	1912.....	\$11
1908.....	<sup>a</sup> 575	1913.....	6
1909.....	<sup>a</sup> 508	1914.....	24
1910.....	813	1915.....	1,027
1911.....	62		

<sup>a</sup> All kinds of cotton knit goods.

In the chapter of this report headed "Capital, profit, and turnover" data are given which show the percentages of manufacturing profit and final profit based on the capital employed in the business, as well as such profits on net sales. In the chapter on "Selling methods" data are given which show the percentages of manufacturing profit of establishments that advertise nationally and those that do not so advertise, also the percentages of manufacturing profit of establishments that sell to retailers as compared with those that sell to jobbers or commission houses.

# CHAPTER III.

## COST AND PROFIT BY SPECIFIED UNITS.

The manufacturers who furnished data in regard to their production and net sales for a year were requested also to supply data in regard to the cost of production of specific styles of hosiery. Each was asked to give details about hosiery of different grades, including the grades of which he sold most. In each case the unit of cost was one dozen pairs of hose of the same style. The number of manufacturers who furnished data was 63. Some of them furnished data for two or more styles and some for styles sold to both retailers and jobbers or through commission houses. The number of styles of each garment for which data were thus secured is shown in Table 49.

TABLE 49.—NUMBER OF STYLES OF HOSE FOR WHICH COST OF PRODUCTION WAS REPORTED.

Styles of hosiery.	Sold to retailers.		Sold to jobbers or through commission houses.	
	Establishments reporting.	Styles reported.	Establishments reporting.	Styles reported.
Five specified styles of hosiery.....	a 23	122	a 44	158
Full fashioned.....	5	22	7	17
Seamless, silk or silk and cotton mixed.....	6	8	9	12
Seamless, cotton.....	18	81	34	98
Seamless, wool or wool and cotton mixed.....	3	7	6	26
Seamless, artificial silk.....	4	4	4	5

a The total establishments that furnished data regarding specified styles, of which 19 sold specified styles to retailers, 40 to jobbers or through commission houses and 4 to retailers or jobbers or through commission houses.

## COST AND PROFIT OF UNITS SOLD TO RETAILERS.

The data relating to the cost of manufacturing specified units are presented in a series of tables which follow:

## COST AND PROFIT BY SPECIFIED UNITS.

TABLE 50.—COST OF PRODUCTION, SELLING PRICE, AND PROFIT OR LOSS PER DOZEN PAIRS OF HOSE SOLD TO RETAILERS.  
[NOTE.—The styles are designated by letters for convenience of reference to Tables 46 and 57. The same letter applied to the products of different establishments does not indicate identity or even similarity of style.]

Establish-ments.	Style.	Local-ity.	Made for—	Description.	Number of needles.	Gross price per dozen pairs.	Net price per dozen pairs.	Usual retail price per pair.	Cost per dozen pairs.				Manufacturing profit or loss.		
									Net cost of all materials.	Direct labor.	Indirect factory expense.	Adminis-trative and selling expense.	Total cost.	Profit.	Loss.
7.....	B	East..	Men....	Silk and lisle, ribbed top, looped heel and toe, high splice, double heel, sole, and toe.	28	\$12.000	\$11.161	\$2.000	\$4.347	\$2.050	\$0.762	\$1.202	\$8.361	\$2.800	.....
7.....	A	do....	do....	Silk, ribbed top, looped heel and toe, high splice, double heel, sole, and toe.	26	8.500	7.906	1.250	3.596	1.950	.724	.851	7.121	.785	.....
3.....	E	do....	do....	Silk, ribbed top, looped heel and toe, high splice, double heel, sole, and toe.	22	4.000	3.747	.500	1.365	1.320	.344	.262	3.291	.456	.....
7.....	E	do....	Women.	Silk, integral welt, looped heel and toe, high splice, double heel and toe.	28	21.500	19.997	3.502	7.972	4.450	1.652	2.154	16.228	3.769	.....
7.....	D	do....	do....	Silk and lisle, integral welt, looped heel and toe, high splice, double heel, sole, and toe.	28	11.500	10.686	2.000	5.184	2.230	.828	1.152	9.394	1.302	.....
3.....	G	do....	do....	Silk and cotton, integral welt, looped heel and toe, high splice, double heel, sole, and toe.	22	8.500	7.963	1.000	3.546	1.915	.554	.558	6.573	1.390	.....
7.....	C	do....	do....	Silk boot, integral welt, looped heel and toe, high splice, double heel, sole, and toe.	26	8.500	7.906	1.250	3.662	2.020	.750	.851	7.283	.623	.....
1.....	D	do....	do....	Silk and cotton, integral welt, looped heel and toe, high splice, double heel and toe.	26	4.000	3.902	.500	.900	1.247	.382	.355	2.884	1.018	.....
9.....	F	West..	Men....	Lisle, ribbed top, looped heel and toe, high splice, double heel and toe.	26	2.750	2.675	.350	.747	1.060	.402	.261	2.470	.205	.....

FULL FASHIONED.



TABLE 50.—COST OF PRODUCTION, SELLING PRICE, AND PROFIT OR LOSS PER DOZEN PAIRS OF HOSE SOLD TO RETAILERS—Continued.

FULL FASHIONED—Continued.

Establish- ments.	Style.	Local- ity.	Made for—	Description.	Number of needles.	Gross price per dozen pairs.	Net price per dozen pairs.	Usual re- tail price per pair.	Net cost of all materials.	Cost per dozen pairs.			Total cost.	Manufacturing profit or loss.	
										Direct labor.	Indirect labor and factory expense.	Adminis- trative and selling expense.		Profit.	Loss.
9.....	D	West.	Men.....	Cotton, ribbed top, looped heel and toe, double heel, sewed welt, high splice, double heel and toe.	22	\$2.000	\$1.946	\$0.250	\$0.601	\$0.835	\$0.317	\$0.190	\$1.943	\$0.063	
3.....	B	East.	do.....	Cotton, ribbed top, looped heel and toe, double heel, sewed welt, high splice, double heel and toe.	22	1.900	1.780	.250	.496	.725	.184	.124	1.529	.257	
73.....	F	West.	Women.	Mercerized cotton, integral welt, looped heel and toe, high splice, double heel, sewed welt, high splice, double heel and toe.	26	4.250	4.179	.500	1.089	1.026	.743	.617	3.475	.704	
9.....	C	do.....	do.....	Mercerized cotton, 4-inch sewed welt, looped heel and toe, high splice, double heel, sole, and toe.	28	4.000	3.892	.500	1.400	1.405	.533	.380	3.718	.174	
3.....	F	East.	do.....	Mercerized cotton, integral welt, looped heel and toe, high splice, double heel, sewed welt, high splice, double heel, sole, and toe.	26	3.850	3.607	.500	1.389	1.190	.270	.253	3.102	.505	
1.....	C	do.....	do.....	Cotton, integral welt, looped heel and toe, high splice, double heel and toe.	26	3.500	3.415	.500	1.390	.966	.297	.311	2.964	.451	
1.....	B	do.....	do.....	Cotton, integral welt, looped heel and toe, high splice, double heel and toe.	24	2.900	2.829	.350	1.032	.876	.271	.258	2.437	.392	
9.....	B	West.	do.....	C. P. lisle, 4-inch sewed welt, looped heel and toe, high splice, double heel, sole, and toe.	24	2.750	2.675	.350	.987	1.030	.391	.261	2.669	.006	
73.....	G	do.....	do.....	Cotton, integral welt, looped heel and toe, high splice, double heel and toe.	22	2.250	2.212	.250	.800	.832	.655	.327	2.614		\$0.402
73.....	H	do.....	do.....	do.....	22	2.150	2.114	.250	.651	.837	.598	.312	2.396		.284

## SEAMLESS, SILK OR SILK AND COTTON MIXED.

9.....	A	do.....	do.....	Cotton, 2 1/2-inch sewed welt, looped heel and toe, high splice, double heel, sole, and toe.	22	2.100	2.043	.250	.634	.810	.307	.200	1.951	.092	
1.....	A	East.	do.....	Cotton, integral welt, looped heel and toe, high splice, double heel and toe.	22	1.950	1.902	.250	.515	.763	.234	.173	1.685	.217	
3.....	A	do.....	do.....	Cotton, floss lined, integral welt, looped heel and toe, double heel, sole, and toe.	22	1.950	1.827	.250	.714	.705	.180	.128	1.727	.100	

61.....	C	West.	Men.....	Silk platted, ribbed top, looped heel and toe, high splice, double heel and toe.	31-220	\$4.250	\$4.180	\$0.500	\$1.433	\$0.450	\$0.227	\$1.171	\$3.281	\$0.869	
54.....	E	do.....	do.....	Ribbed top, looped toe, high splice, triple heel and toe, double sole.	31-220	4.150	4.129	.500	1.550	.585	.265	1.160	3.560	.569	
54.....	D	do.....	do.....	Ribbed top, looped toe, high splice, double heel and toe.	31-220	4.150	4.129	.500	1.787	.585	.265	1.160	3.797	.332	
60.....	B	do.....	do.....	Ribbed top, looped toe, high splice, double heel, sole, and toe, ravel stop, long heel, sole, and toe.	31-220	4.100	4.022	.500	1.851	.393	.265	1.417	3.956	.066	
58.....	C	do.....	do.....	Ribbed top, looped toe, high splice, double heel and toe.	31-220	4.000	3.828	.500	2.089	.540	.340	.458	3.425	.403	
53.....	B	do.....	do.....	Ribbed top, looped toe, high splice, double heel, sole, and toe, ravel stop, long heel, sole, and toe.	31-220	3.750	3.611	.500	2.090	.360	.205	.260	2.885	.726	
60.....	E	do.....	Women.	Silk boot, sewed welt, looped heel, sole, and toe.	31-220	6.250	6.131	.750	2.584	.348	.269	2.160	5.361	.770	
72.....	E	do.....	do.....	Sewed welt, looped toe, high splice, double heel, sole, and toe.	31-220	4.250	4.167	.500	2.219	.348	.214	.599	3.380	.787	

## SEAMLESS COTTON.

61.....	E	West.	Women.	Sewed welt, looped toe, high splice, double heel and toe.	31-200	\$4.250	\$4.180	\$0.500	\$1.286	\$0.400	\$0.205	\$1.171	\$3.062	\$1.118	
59.....	G	do.....	do.....	Henknit welt, looped toe, high splice, triple heel and toe, double sole.	31-220	4.000	3.992	.500	1.191	.383	.315	.647	2.536	1.456	
60.....	D	do.....	do.....	Light weight, super lisle, sewed welt, looped toe, high splice, double heel, sole, and toe.	31-220	4.000	3.924	.500	1.222	.335	.242	1.382	3.181	.743	

TABLE 50.—COST OF PRODUCTION, SELLING PRICE, AND PROFIT OR LOSS PER DOZEN PAIRS OF HOSE SOLD TO RETAILERS—Continued.

Estab-lish-ments.	Style.	Local-ity.	Made for—	Description.	Number of needles.	Gross price per dozen pairs.	Net price per dozen pairs.	Cost per dozen pairs.				Manufacturing profit or loss.
								Net cost of all materials.	Direct labor.	Indirect labor and factory expense.	Adminis-trative and selling expense.	
12.....	B <sup>a</sup>	East.	Women.	Sewed welt, looped toe.....	3½-200	\$4.000	\$4.000	\$0.704	\$0.864	\$0.783	\$0.913	\$0.726
61.....	D	West.	do.	Sewed welt, looped toe, double heel, sole, and toe.	3½-200	2.900	2.852	1.023	.380	.183	.799	.467
60.....	C	do.	do.	Sewed welt, looped toe, high splice, double heel, sole, and toe.	3½-200	2.750	2.698	1.166	.323	.206	.950	.063
72.....	D	do.	do.	Ribbed leg, plain welt, looped toe, high splice, and toe.	3½-176	2.750	2.696	1.084	.453	.187	.388	.584
69.....	F	do.	do.	Turn welt, knitted heel and toe, double sole.	3½-200	2.400	2.395	.850	.365	.301	.388	.491
72.....	C	do.	do.	Ribbed leg, plain welt, looped toe, high splice, and toe.	3½-164	2.250	2.206	1.000	.424	.162	.317	.303
73.....	E	do.	do.	Sewed welt, looped toe, double heel and toe, high splice, double heel, sole, and toe.	3½-220	2.150	2.114	.956	.374	.308	.312	.164
41.....	C	South.	do.	Sewed welt, looped toe, double heel, sole, and toe.	3½-220	2.150	2.108	.932	.358	.165	.245	.408
72.....	B	West.	do.	Ribbed hose, integral welt, looped toe, high splice, double heel, sole, and toe.	3½-164	3.150	2.108	.783	.425	.165	.303	.432
14.....	D	East.	do.	4-inch sewed welt, looped toe, double heel, sole, and toe.	3½-240	2.150	2.104	.960	.265	.113	.061	.705
57.....	B	West.	do.	Sewed top welt, looped toe, double heel and toe.	3½-220	2.100	2.075	1.145	.330	.309	.496	\$0.205
57.....	C	do.	do.	Ribbed welt, looped toe, double heel and toe.	3½-200	2.050	2.026	.711	.503	.229	.484	.061
15.....	C	East.	do.	Sewed welt, looped toe.....	3½-220	2.000	1.940	.872	.366	.213	.197	.262
15.....	B	do.	do.	do.	3½-220	2.000	1.940	.710	.325	.195	.197	.513
14.....	E	do.	Men	4-inch sewed welt, looped toe, double heel.	3½-220	1.150	1.126	.415	.265	.113	.063	.300

## COST AND PROFIT BY SPECIFIED UNITS.

Estab-lish-ments.	Style.	Local-ity.	Made for—	Description.	Number of needles.	Gross price per dozen pairs.	Net price per dozen pairs.	Cost per dozen pairs.				Manufacturing profit or loss.
								Net cost of all materials.	Direct labor.	Indirect labor and factory expense.	Adminis-trative and selling expense.	
72.....	A	West.	Women.	Sewed welt, looped toe, high splice, double heel and toe.	3½-176	1.250	1.225	.448	.241	.105	.176	.215
41.....	D	South.	do.	Sewed welt, looped toe, double heel, sole, and toe.	3½-220	1.200	1.177	.508	.306	.108	.136	.119
14.....	F	East.	do.	4-inch sewed welt, looped toe, double heel.	3½-220	1.150	1.126	.471	.345	.132	.083	.145
14.....	B	do.	do.	do.	3½-220	1.150	1.126	.530	.265	.113	.083	.185
14.....	C	do.	do.	do.	3½-220	1.150	1.126	.500	.265	.113	.083	.215
44.....	F	do.	do.	Sewed welt, looped toe, double heel, sole, and toe.	3½-220	1.125	1.108	.431	.305	.102	.174	.121
44.....	D	do.	do.	do.	3½-220	1.125	1.108	.440	.350	.140	.170	.008
15.....	A	do.	do.	Sewed welt, looped toe.....	3½-220	1.000	.985	.406	.265	.109	.151	.024
14.....	A	do.	do.	4-inch sewed welt, looped toe, double heel, sole, and toe.	3½-176	1.425	.416	.172	.127	.080	.012	.025
61.....	F	West.	Misses.	Ribbed hose, reinforced, integral welt, looped toe, double heel and toe.	3½-160	2.900	2.852	.788	.530	.223	.799	.512
72.....	I	do.	do.	Ribbed hose, selvage welt, looped toe, double heel and toe.	3½-152	2.250	2.206	.950	.434	.176	.317	.329
72.....	H	do.	do.	Ribbed hose, selvage welt, looped toe, double heel and toe, size 7½.	3½-152	2.100	2.059	.638	.389	.146	.276	.610
72.....	K	do.	do.	Plain welt, looped toe, double heel, sole, and toe, size 7½.	3½-140	2.100	2.059	.617	.305	.145	.296	.606
12.....	A <sup>a</sup>	East.	Children	Selvaged welt, looped toe, double heel, sole, and toe.	2½-146	3.000	3.000	.540	.653	.569	.655	.544
57.....	D	West.	do.	Ribbed hose, looped toe, double heel, sole, and toe.	3½-160	2.800	2.767	.833	.530	.396	.661	.347
59.....	B	do.	do.	Integral welt, looped toe, triple heel and toe, single sole.	2½-200	2.400	2.335	.661	.448	.370	.388	.528
59.....	A	do.	do.	Integral welt, looped toe, triple heel and toe.	3½-160	2.150	2.145	.600	.425	.331	.348	.331
73.....	K	do.	do.	Integral welt, looped toe, double heel, sole, and toe.	3½-154	2.150	2.114	.775	.467	.346	.312	.214
60.....	F	do.	do.	Ribbed hose, integral welt, looped toe, double heel, sole, and toe, double knee.	3½-256	2.150	2.109	.884	.388	.261	.743	.167
73.....	M	do.	do.	Integral welt, looped toe, double heel and toe, size 8.	1½-120	2.000	1.966	.797	.432	.292	.291	.154
73.....	I	do.	do.	Integral welt, looped toe, double heel and toe, size 8.	2½-124	2.000	1.966	.849	.457	.324	.291	.045
72.....	J	do.	do.	Plain welt, looped toe, double heel, sole, and toe, sizes 4-6.	2½-104	1.900	1.863	.344	.345	.119	.268	.787

e Foot.

b Gross price of 1 dozen pairs sold to jobbers.

e Sold by mail order.

d Leg.

TABLE 50.—COST OF PRODUCTION, SELLING PRICE, AND PROFIT OR LOSS PER DOZEN PAIRS OF HOSE SOLD TO RETAILERS—Continued.

Estab-lish-ments,	Style.	Local-ity.	Made for—	Description.	Number of needles.	Gross price per dozen pairs.	Net price per dozen pairs.	Usual re-tail price per pair.	Cost per dozen pairs.				Manufacturing profit or loss.		
									Net cost of all materials.	Direct labor.	Indirect labor and factory expense.	Adminis-trative and selling expense.	Total cost.	Profit.	Loss.
72	G	West.	Children.	Ribbed hose, salvaged welt, looped toe, double heel and toe.	94	\$1.400	\$1.373	\$0.150	\$0.758	\$0.393	\$0.154	\$0.197	\$1.502	.....	\$0.129
73	L	..do.	..do.	Integral welt, looped toe, double heel and toe, size 8.	14-120	1.250	1.229	.150	.568	.374	.266	.181	1.389	.....	.160
41	E	South.	..do.	Sewed welt, looped toe, double heel and toe.	a 240 b 130	1.250	1.226	.150	.515	.257	.114	.142	1.028	\$0.198	.....
72	F	West.	..do.	Ribbed hose, salvaged welt, looped toe, double heel and toe.	54	1.150	1.127	.150	.373	.297	.106	.162	.988	.189	.....
73	J	..do.	..do.	Integral welt, looped toe, double heel and toe, size 8.	14-120	1.100	1.082	.150	.455	.342	.298	.160	1.196	.....	.114
12-59	C <sup>a</sup> E	East. West.	Men.	Ribbed top, looped toe.	34-176	4.000	4.000	.350	.992	.670	.691	.913	2.966	1.034	.....
61	B	..do.	..do.	Ribbed top, looped toe, 4-ply heel and toe.	34-200	4.000	3.992	.500	1.701	.378	.311	.647	3.037	.955	.....
59	D	..do.	..do.	Ribbed top, looped toe, high splice, double heel, sole, and toe.	34-200	2.750	2.705	.330	.785	.400	.179	.759	2.123	.582	.....
72	Q	..do.	..do.	Ribbed top, looped toe, high splice triple heel and toe, double sole.	34-176	2.400	2.385	.330	.995	.368	.303	.398	2.054	.341	.....
59	C	..do.	..do.	Ribbed top, looped toe, high splice, double heel and toe, double sole.	34-188	2.250	2.296	.250	.866	.377	.153	.317	1.713	.492	.....
61	A	..do.	..do.	Ribbed top, looped toe, high splice, triple heel and toe.	34-200	2.150	2.145	.250	.632	.388	.320	.348	1.688	.457	.....
57	A	..do.	..do.	Ribbed top, looped toe, double heel and toe.	34-200	2.150	2.115	.250	.629	.390	.167	.593	1.779	.396	.....
54	C	..do.	..do.	Ribbed top, looped toe, high splice, triple heel and toe, double sole.	34-220	2.100	2.075	.250	.664	.425	.318	.496	1.903	.172	.....
54	B	East.	..do.	Ribbed top, looped toe, double sole.	34-200	2.050	2.040	.250	.721	.520	.235	.573	2.049	.069	.....
51	A	East.	..do.	Ribbed top, looped toe.	34-200	2.050	2.040	.250	.744	.520	.235	.573	2.072	.....	.062
						2.050	2.024	.250	.714	.463	.162	.375	1.714	.310	.....

## THE HOSIERY INDUSTRY.

## COST AND PROFIT BY SPECIFIED UNITS.

73	A	West.	do.	Ribbed top, looped toe, high splice, double heel and toe.	34-200	2.050	2.016	.250	.635	.393	.265	.298	1.591	.425	.....
55	B	do.	do.	Ribbed top, looped toe, high splice, double heel, sole, and toe.	34-220	2.050	2.014	.250	.709	.480	.183	.294	1.666	.346	.....
55	E	do.	do.	Ribbed top, looped toe, high splice, double heel and toe.	34-220	2.050	2.014	.250	.744	.490	.187	.294	1.715	.290	.....
60	G	do.	do.	Ribbed top, looped toe, high splice, double heel and toe.	34-200	2.050	2.011	.250	.687	.375	.254	.708	2.064	.053	.025
73	C	do.	do.	Ribbed top, looped toe, high splice, double heel, sole and toe.	34-220	2.000	1.966	.250	.618	.439	.301	.291	1.649	.317	.....
41	B	South.	do.	Looped toe, double heel and toe.	34-220	2.000	1.961	.250	.651	.319	.211	.128	1.408	.553	.....
35	D	do.	do.	Looped toe, high splice, double heel, toe and sole.	34-220	2.000	1.934	.250	.828	.282	.176	.351	1.637	.297	.....
58	B	West.	do.	Ribbed top, looped toe, double heel and toe.	34-200	2.000	1.914	.250	.832	.470	.296	.228	1.846	.068	.....
54	A	do.	do.	Ribbed top, looped toe, high splice, triple heel and toe, double sole.	34-200	1.100	1.094	.150	.423	.480	.217	.307	1.427	.....	.333
44	C	East.	do.	Looped toe, double heel and toe.	34-200	1.100	1.084	.125	.407	.363	.144	.166	1.080	.004	.....
73	B	West.	do.	Ribbed top, looped toe, double heel and toe.	34-180	1.100	1.082	.150	.321	.325	.215	.160	1.021	.061	.....
72	M	do.	do.	Looped toe, double heel and toe.	34-200	1.100	1.078	.150	.446	.283	.105	.155	.989	.089	.....
35	C	West.	do.	Looped toe, double heel and toe.	34-220	1.100	1.064	.150	.396	.257	.159	.193	1.010	.059	.....
58	A	West.	do.	Ribbed top, looped toe, double heel.	34-200	1.100	1.083	.125	.388	.360	.267	.126	1.141	.....	.088
44	A	East.	do.	Looped toe, double heel and toe.	34-200	1.050	1.035	.125	.390	.368	.120	.159	1.037	.....	.092
41	A	South.	do.	Ribbed top, looped toe, high splice, triple heel.	34-220	1.050	1.026	.150	.348	.265	.097	.120	.830	.196	.....
68	B	East.	do.	Ribbed top, looped toe, high splice, triple heel.	34-220	1.000	.980	.150	.316	.330	.120	.102	.868	.112	.....
68	A	do.	do.	Ribbed top, looped toe, triple heel.	34-200	1.000	.980	.150	.375	.325	.119	.102	.921	.069	.....
35	B	South.	do.	Looped toe, spliced heel and toe.	34-176	1.000	.967	.150	.402	.207	.129	.176	.914	.053	.....
44	B	East.	do.	Looped toe, double heel, sole and toe.	34-200	.950	.886	.125	.327	.348	.115	.143	.933	.003	.....
72	L	West.	do.	Ribbed top, looped toe, double heel and toe.	34-100	.875	.838	.100	.328	.143	.069	.124	.664	.204	.....
35	A	South.	do.	Looped toe, double heel and toe.	34-144	.750	.725	.100	.361	.192	.120	.132	.805	.080	.....
61	G	West.	Boys	do.	{ b 34-132 c 34-188	2.900	2.852	.330	1.038	.510	.229	.799	2.576	.276	.....

<sup>a</sup> Leg.<sup>b</sup> Foot.<sup>c</sup> Sold by mail order.

TABLE 50.—COST OF PRODUCTION, SELLING PRICE, AND PROFIT OR LOSS PER DOZEN PAIRS OF HOSE SOLD TO RETAILERS—Continued.

SEAMLESS, WOOL OR WOOL AND COTTON MIXED.

Estab-lish-ments.	Style.	Local-ity.	Made for—	Description.	Number of needles.	Gross price per dozen pairs.	Net price per dozen pairs.	Usual retail price per pair.	Cost per dozen pairs.				Manufacturing profit or loss.		
									Net cost of all materials.	Direct labor.	Indirect labor and factory selling expense.	Adminis-trative and selling expense.	Total cost.	Profit.	Loss.
72.....	R	West.	Men	Ribbed top, looped toe, double heel and toe.	34-100	\$2.250	\$2.206	\$0.250	\$0.814	\$0.276	\$0.123	\$0.317	\$1.530	\$0.676	.....
72.....	O	do.	do.	do.	34-176	2.150	2.108	.250	.928	.306	.137	.303	1.674	.434	.....
72.....	N	do.	do.	Wool plated, ribbed top, looped toe, double heel and toe.	34-160	2.100	2.059	.250	.879	.331	.142	.296	1.648	.411	.....
68.....	E	East.	do.	Ribbed top, looped toe, triple heel.	34-200	1.850	1.750	.257	.723	.375	.188	.183	1.469	.288	.....
69.....	B	do.	do.	Ribbed top, looped toe.	34-108	1.050	.908	.125	.411	.332	.096	.067	.906	.002	.....
68.....	D	do.	do.	Ribbed top, looped toe, double heel.	34-104	1.000	.980	.100	.591	.310	.144	.102	1.147	.....	\$0.167
68.....	C	do.	do.	do.	34-104	.950	.931	.100	.492	.310	.144	.067	1.043	.....	.112

SEAMLESS, ARTIFICIAL SILK.

73.....	D	West.	Men	Artificial silk, ribbed top, looped toe, high splice, double heel, sole, and toe.	34-200	\$2.150	\$2.114	\$0.250	\$1.036	\$0.416	\$0.346	\$0.312	\$2.110	\$0.004	.....
55.....	A	do.	do.	do.	34-220	2.150	2.113	.250	1.059	.440	.168	.308	1.975	.138	.....
73.....	P	do.	do.	Artificial silk, ribbed top, looped toe, high splice, double heel and toe.	34-220	2.100	2.106	.250	.925	.411	.211	.308	1.859	.269	.....
53.....	A	do.	do.	Artificial silk, ribbed top, looped toe, high splice, double heel, sole, and toe, ravel top, long toe.	34-220	2.100	2.022	.250	1.021	.310	.162	.145	1.658	.364	.....

The tables show that some styles having the same, or practically the same, net cost have different retail prices. This difference is due principally to the fact that some retailers, owing to the large amount of their business or to their very efficient organization can afford to sell goods at a smaller margin of profit than others.

After the first lot of any style of hosiery is made the manufacturer of course knows the quantity of each kind of yarn that was used in knitting one dozen pairs, and therefore is able to figure closely the cost of the yarns.

Manufacturers, even those who are most unsystematic in cost accounting, are able to tell what is the cost of the direct labor per dozen pairs of hose. They can easily do this, because practically all direct labor operations are performed by pieceworkers.

In the case of overhead charges, including indirect labor, however, the cost per unit had to be apportioned.

The salaries of active officers or partners, or the amount that individual owners would have paid for services which they themselves performed, were entered under indirect labor, administrative expense, or selling expense, according to the nature of the services performed by each. Under the latter head all expenses of selling were included.

The "overhead" charges on all units specified in this report were computed according to a uniform method called the "dual method," which is explained in a section of the report headed "Simplified cost accounting" (p. 156). The "overhead" for indirect labor and for factory expense was computed on the basis of the direct labor, and the "overhead" for administrative and selling cost was computed on the selling price.

The labor cost of the units specified in Table 50 was on the basis of wages paid from March to July, 1914, but these differed little if any from the wages paid during 1913. The cost of the materials used in the specified units was on the basis of the cost of materials from March to July, 1914, which was about the same as in 1913 for cotton and cotton yarns, but slightly higher for wool or woolen yarns. The "overhead" charges on the units were computed on the basis of the overhead expense in the establishment during its previous business year, which in most cases was the calendar year 1913.

An examination of Table 50 discloses a great difference in the profits on the garments. This difference occurs on garments of the same grade, and even on garments of practically the same grade made by the same establishment.

The losses on some styles which are shown in this table may be explained on two grounds. Some establishments have such crude systems for computing their "overhead" charges that they do not know exactly, or even approximately, how much their profit or loss is on certain grades. Such unsystematic establishments may continue for a long time to sell a particular grade at a loss without knowing it. Some establishments, however, knowing accurately what a certain grade costs, will sell it on a small margin of profit, or even at a loss, for the purpose of attracting custom for more profitable styles. An establishment may find it necessary to carry a complete line of styles in order to meet the demands of its customers and to hold its trade, and may consider it to be good business policy to sell at or below cost certain styles to customers who will buy higher-priced goods on which a good profit is realized. Examination of the table shows that losses were nearly all on the grades of low or medium price.



TABLE 51.—COST OF PRODUCTION, SELLING PRICE, AND PROFIT OR LOSS, PER DOZEN PAIRS OF HOSE SOLD TO JOBBERS AND COMMISSION HOUSES.

[Note.—The styles are designated by letters for convenience of reference to Tables 56 and 57. The same letter applied to the product of different establishments does not indicate identity or even similarity of styles.]

FULL FASHIONED.

Establishments.	Style.	Locality.	Made for—	Description.	Number of needles.	Gross price per dozen pairs.	Net price per dozen pairs.	Usual retail price per pair.	Cost per dozen pairs.				Manufacturing profit or loss.	
									Net cost of all materials.	Direct labor.	Indirect labor and expense.	Administrative and selling expense.	Total cost.	Profit.
6.....	B.....	East..	Men....	Ingrained silk, ribbed top, looped heel and toe, high splice, double heel, sole, and toe.	26	\$6.750	\$6.576	\$1.000	\$2.429	\$1.658	\$0.428	\$0.498	\$5.013	\$1.563
8.....	E.....	do....	do....	Silk and cotton, ribbed top, looped heel and toe, high splice, double heel and toe, split sole.	26	3.625	3.543	.750	1.712	.920	.289	.184	3.085	.458
8.....	F.....	do....	do....	Silk and cotton, ribbed top, looped heel and toe, high splice, double heel and toe, split sole.	22	3.600	3.420	.500	1.444	.886	.289	.184	3.135	.356
72.....	I.....	do....	do....	Silk and cotton, ribbed top, looped heel and toe, high splice, double heel and toe, split sole.	22	3.500	3.421	.500	2.002	.805	.235	.178	3.220	.201
8.....	D.....	do....	do....	Silk, reinforced welt, looped heel and toe.	26	7.250	6.619	1.000	2.836	1.935	.457	.507	5.735	.884
2.....	B.....	do....	Women.	Ingrained silk, knitted welt, looped heel and toe.	26	6.650	6.478	1.000	3.032	1.763	.455	.491	5.741	.737
6.....	A.....	do....	do....	Silk, reinforced welt, looped heel and toe.	26	6.500	5.934	1.000	2.663	1.855	.441	.454	5.413	.521
2.....	A.....	do....	do....	Egyptian cotton lisle, integral welt, looped heel and toe, high splice, double heel, sole and toe.	220	2.900	2.717	.350	1.055	.995	.234	.191	2.475	.242
3.....	C.....	do....	do....	Cotton and wool, integral welt, looped heel and toe, high splice, double heel, sole and toe.	220	2.650	2.483	.350	.685	.985	.232	.174	2.076	.407
3.....	D.....	do....	do....	Cotton, ribbed top, high splice heel, sewed toe, double heel, sole and toe.	22	1.800	1.710	.250	.484	.738	.419	.109	1.750	.....
71.....	J.....	do....	Men....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	\$0.040

## SEAMLESS, SILK OR SILK AND COTTON MIXED.

71.....	K.....	do....	do....	Wood ribbed top, high splice heel, sewed toe, wool reinforced heel.	22	3.375	3.206	.500	1.288	.708	.423	.204	2.623	.583
71.....	L.....	do....	do....	Cotton and wool, ribbed top, integral welt, sewed toe, high splice.	22	3.375	3.206	.500	1.386	.682	.417	.204	2.669	.507
4.....	A.....	do....	do....	Cotton and wool, ribbed top, looped heel and toe.	30	2.900	2.339	.350	.853	.535	.268	.143	1.799	.540
4.....	B.....	do....	Women.	Cotton and wool, integral welt, looped heel and toe.	33	3.800	3.556	.500	1.512	.875	.369	.217	2.973	.583
71.....	G.....	do....	do....	Cotton and wool, integral welt, looped heel, sewed toe, high splice.	22	3.750	3.562	.500	1.388	.757	.458	.227	2.800	.762
71.....	H.....	do....	do....	Cotton and wool, integral welt, double heel, sewed toe, high splice.	22	3.025	3.444	.500	1.311	.706	.425	.220	2.662	.782
52.....	B.....	East..	Men....	Ribbed top, looped toe, high splice, double heel, sole, and toe.	31-220	\$3.500	\$3.410	\$0.500	\$2.012	\$0.605	\$0.329	\$0.380	\$3.326	\$0.084
46.....	C.....	do....	do....	Pure silk mixed with artificial silk, ribbed top, looped toe, high splice, double heel, sole, and toe.	4-220	3.400	3.315	.500	2.019	.450	.330	.474	3.273	.042
49.....	B.....	do....	do....	Ribbed top, looped toe, high splice, double heel, sole, and toe.	31-220	3.250	3.186	.500	2.305	.558	.261	.202	3.326	.....
56.....	D.....	West..	do....	Ribbed top, looped toe, high splice, double heel, sole, and toe.	31-220	3.250	3.169	.500	2.049	.460	.339	.309	3.157	.012
48.....	F.....	East..	do....	Ribbed top, looped toe, high splice, double heel, sole, and toe.	31-220	3.000	2.832	.350	1.189	.810	.341	.153	2.463	.389
46.....	A.....	do....	do....	Ribbed top, looped toe, high splice, double heel and toe, split sole.	31-204	1.850	1.804	.250	.783	.465	.287	.238	1.793	.011
43.....	C.....	do....	Women.	Sewed welt, looped toe, high splice, double heel, sole, and toe.	31-240	3.900	3.430	.500	1.656	.565	.593	.319	3.133	.297
48.....	D.....	do....	do....	Silk, double welt, looped toe, high splice, double heel, sole, and toe.	31-240	3.350	3.185	.500	1.634	.600	.296	.169	2.759	.426
22.....	B.....	do....	do....	Silk boot, sewed welt, automatic knit heel, looped toe.	31-220	1.850	1.795	.250	1.067	.413	.215	.110	1.835	.040
45.....	A.....	do....	do....	Sewed welt, looped toe, high splice, double heel, sole, and toe.	31-220	1.825	1.778	.250	.988	.554	.331	.207	2.080	.302
42.....	D.....	do....	Infants.	Ribbed top, looped toe, high splice, double heel, sole, and toe.	10	1.800	1.765	.200	.849	.250	.128	.287	1.514	.251

TABLE 51.—COST OF PRODUCTION, SELLING PRICE, AND PROFIT OR LOSS, PER DOZEN PAIRS OF HOSE SOLD TO JOBBERS AND COMMISSION HOUSES—Continued.

SEAMLESS, COTTON.															
Estab- lish- ments.	Style.	Local- ity.	Made for—	Description.	Number of needles.	Gross price per dozen pairs.	Net price per dozen pairs.	Usual re- tail price per pair.	Cost per dozen pairs.				Manufacturing profit or loss.		
									Net cost of all materials.	Direct labor.	Indirect labor and factory expense.	Adminis- trative and selling expense.	Total cost.	Profit. Loss.	
49.....	A	East..	Men.....	Ribbed top, looped toe, high splice, double heel, sole, and toe.	3½-220	\$1.750	\$1.715	\$0.250	\$0.988	\$0.443	\$0.161	\$0.109	\$1.681	\$0.034	.....
56.....	B	West..	do.....	do.....	3½-220	1.650	1.609	.250	.743	.375	.276	.157	1.551	.058	.....
8.....	B	East..	do.....	do.....	3½-240	1.550	1.515	.250	.615	.410	.120	.079	1.224	.291	.....
46.....	B	do.....	do.....	do.....	4-220	1.550	1.511	.250	.484	.390	.240	.216	1.330	.220	.....
56.....	B	West..	do.....	Ribbed top, looped toe, dou- ble heel, sole, and toe.	3½-220	1.500	1.462	.250	.623	.375	.276	.143	1.417	.083	.....
52.....	A	East..	do.....	Ribbed top, looped toe, high splice, double heel and toe.	3½-220	1.500	1.461	.250	.578	.463	.214	.163	1.418	.043	.....
48.....	D	do.....	do.....	Ribbed top, looped toe.....	3½-220	1.500	1.426	.250	.404	.590	.215	.076	1.285	.141	.....
8.....	A	do.....	do.....	Ribbed top, looped toe, high splice, double heel, sole, and toe.	3½-224	1.400	1.368	.250	.487	.410	.120	.072	1.089	.279	.....
24.....	A	do.....	do.....	Ribbed top, looped toe.....	136	1.050	1.018	.125	.491	.307	.147	.114	1.059	.087	\$0.041
24.....	C	do.....	do.....	Ribbed top, looped toe, dou- ble heel, sole, and toe.	220	1.025	.993	.125	.332	.347	.166	.111	1.028	.....	.083
24.....	B	do.....	do.....	do.....	200	1.025	.993	.125	.404	.347	.166	.111	1.035	.....	.042
47.....	C	do.....	do.....	Ribbed top, looped toe, dou- ble heel, sole, and toe.	3½-220	1.000	.980	.150	.311	.330	.157	.103	1.005	.130	.....
36.....	B	South..	do.....	Looped toe, double heel and toe.	3½-200	1.000	.978	.150	.543	.241	.086	.085	.955	.023	.....
48.....	B	East..	do.....	Ribbed top, looped toe.....	3½-176	1.000	.951	.150	.279	.435	.159	.051	.924	.027	.....
33.....	A	South..	do.....	Looped toe, high splice, dou- ble heel, sole, and toe.	3½-220	1.000	.939	.150	.309	.184	.110	.071	.684	.255	.....
47.....	B	East..	do.....	Ribbed top, looped toe, dou- ble heel, sole, and toe.	3½-220	.950	.931	.100	.255	.265	.089	.055	.647	.284	.....
45.....	C	do.....	do.....	do.....	3½-200	.950	.925	.125	.328	.295	.167	.108	.898	.027	.....
33.....	B	South..	do.....	Looped toe, high splice, dou- ble heel, sole, and toe.	3½-220	.950	.915	.150	.306	.196	.115	.070	.687	.228	.....
36.....	B	do.....	do.....	Looped toe, double heel and toe.	3½-220	.900	.881	.125	.319	.267	.177	.059	.822	.039	.....

39.....	C	do.....	do.....	do.....	3½-176	.875	.856	.125	.420	.233	.084	.073	.810	.046	.....
45.....	D	East..	do.....	Ribbed top, looped toe, dou- ble heel and toe.	3½-200	.850	.828	.150	.290	.282	.156	.087	.795	.083	.....
29.....	C	South..	do.....	Looped toe, double heel and toe.	3½-136	.800	.780	.125	.401	.200	.108	.085	.744	.086	.....
17.....	C	East..	do.....	Ribbed top, looped toe, dou- ble heel and toe.	3½-196	.750	.712	.100	.288	.300	.146	.087	.771	.059	.....
29.....	B	South..	do.....	Looped toe, double heel and toe.	3½-136	.725	.707	.100	.325	.195	.106	.081	.657	.050	.....
18.....	D	East..	do.....	Ribbed top, looped toe, dou- ble heel and toe.	4-180	.725	.684	.100	.302	.295	.110	.028	.735	.....	.051
29.....	A	South..	do.....	Looped toe, double heel and toe.	3½-136	.700	.683	.100	.340	.175	.095	.080	.640	.043	.....
40.....	A	do.....	do.....	Looped toe, spliced heel and toe.	176	.675	.661	.100	.279	.201	.131	.026	.637	.024	.....
37.....	B	do.....	do.....	Sewed top, looped toe, dou- ble heel, sole, and toe.	3½-160	.650	.643	.100	.265	.202	.091	.017	.575	.068	.....
34.....	C	do.....	do.....	Looped toe, spliced heel and toe.	3½-160	.650	.643	.100	.453	.073	.086	.052	.604	.....	.021
30.....	B	do.....	do.....	Looped toe, spliced heel and toe.	3½-160	.650	.641	.100	.264	.202	.152	.028	.646	.....	.005
36.....	A	do.....	do.....	Looped toe.....	3½-136	.650	.637	.100	.233	.184	.119	.043	.599	.038	.....
39.....	A	do.....	do.....	do.....	3½-136	.650	.636	.100	.318	.201	.074	.055	.648	.....	.012
34.....	B	do.....	do.....	Sewed toe.....	81	.600	.594	.100	.401	.073	.086	.048	.608	.....	.014
27.....	A	do.....	do.....	Looped toe, spliced heel and toe.	3½-200	.575	.563	.130	.346	.138	.084	.013	.581	.....	.018
34.....	A	do.....	do.....	Sewed toe.....	81	.550	.544	.100	.351	.093	.075	.043	.532	.....	.012
62.....	A	East..	do.....	Ribbed top, sewed heel and toe.	3½-160	.520	.499	.100	.187	.180	.082	.037	.486	.....	.013
27.....	B	South..	do.....	Looped toe, spliced heel and toe.	3½-176	.485	.475	.100	.273	.123	.072	.011	.479	.....	.004
12.....	A	East..	do.....	Ribbed top, sewed heel and toe.	3½-220	.425	.404	.050	.161	.150	.082	.014	.407	.....	.003
18.....	E	do.....	Boys.....	Ribbed top, looped toe, double heel and toe.	3½-132	1.050	.991	.150	.531	.345	.147	.040	1.083	.....	.072
38.....	B	West..	do.....	Servage top, looped toe, double heel and toe.	3½-160	.970	.960	.150	.683	.318	.104	.042	1.147	.....	.187
14.....	D	East..	Women.....	size 4½ to 4-inch sewed welt, spliced heel.	3½-240	1.850	1.811	.250	.960	.265	.113	.053	1.391	.420	.....
49.....	C	do.....	do.....	Sewed welt, looped toe, high splice, double heel, sole, and toe.	3½-240	1.750	1.715	.250	.861	.428	.157	.109	1.555	.190	.....
43.....	B	do.....	do.....	Sewed welt, looped toe.....	3½-200	1.750	1.715	.250	.779	.385	.159	.053	1.747	.....	.032
46.....	B	do.....	do.....	Sewed welt, looped toe, high splice, double heel, sole, and toe.	3½-220	1.750	1.705	.250	1.064	.319	.213	.159	1.815	.....	.110
22.....	A	do.....	do.....	Sewed welt, automatic knit heel, looped toe.	220	1.750	1.698	.250	.925	.313	.170	.104	1.512	.....	.186

a Gross price of 1 dozen pairs sold to retailers.

TABLE 51.—COST OF PRODUCTION, SELLING PRICE, AND PROFIT OR LOSS, PER DOZEN PAIRS OF HOSE SOLD TO JOBBERS AND COMMISSION HOUSES—Continued.

SEAMLESS, COTTON—Continued.

Estab-lish-ments.	Style.	Local-ity.	Made for—	Description.	Number of needles.	Gross price per dozen pairs.	Net price per dozen pairs.	Usual retail price per pair.	Cost per dozen pairs.				Manufacturing profit or loss.		
									Net cost of all materials.	Direct labor.	Indirect labor and factory expense.	Adminis-trative selling expense.	Total cost.	Profit.	Loss.
15.....	B	East.	Women.	{Sewed welt, looped toe, heel knit by machine.	3½-220	{ \$1.750 a 2.000	\$1.697	\$0.250	\$0.710	\$0.325	\$0.195	\$0.172	\$1.402	\$0.295	.....
15.....	C	do.	do.	do.	3½-220	1.750	1.697	.250	.872	.366	.213	.172	1.623	.074	.....
21.....	C	do.	do.	Sewed welt, looped toe, double heel and toe.	3½-220	a 2.000	1.750	.250	.887	.284	.202	.111	1.484	.186	.....
22.....	C	do.	do.	Ribbed welt, automatic knit heel, looped toe.	176	1.700	1.649	.250	.711	.463	.237	.101	1.512	.137	.....
33.....	F	South.	do.	Sewed welt, looped toe, high splice, double heel	3½-220	1.700	1.637	.250	.710	.177	.114	.124	1.125	.512	.....
19.....	B	East.	do.	Sewed welt, looped toe, high splice, double heel, sole, and toe.	3½-220	1.650	1.609	.250	.798	.305	.206	.128	1.432	.177	.....
23.....	B	do.	do.	Integral welt, looped toe, high splice, double heel, sole, and toe.	220	1.650	1.585	.250	.837	.410	.180	.120	1.547	.048	.....
48.....	C	do.	do.	Sewed welt, looped toe, high splice, double heel, sole, and toe.	3½-220	1.500	1.426	.250	.706	.470	.180	.076	1.432	\$0.006	.....
28.....	B	South.	do.	Sewed welt, looped toe, high splice, double heel, sole, and toe.	220	1.150	1.112	.150	.546	.202	.160	.119	1.027	.085	.....
14.....	E	East.	do.	{Four-inch sewed welt, looped toe, spliced heel.	3½-220	{ 1.000 a 1.150	.979	.125	.415	.265	.113	.029	.822	.157	.....
14.....	C	do.	do.	do.	3½-220	1.000	.979	.125	.500	.265	.113	.029	.907	.072	.....
14.....	B	do.	do.	do.	3½-220	1.000	.979	.125	.530	.265	.113	.029	.937	.042	.....
14.....	F	do.	do.	do.	3½-220	a 1.100	.979	.125	.471	.346	.132	.039	.977	.062	.....
52.....	C	do.	do.	Integral welt, looped toe, double heel and toe.	3-200	1.000	.974	.150	.468	.420	.195	.108	1.191	.267	.....
11.....	B	do.	do.	Sewed welt, looped toe, double heel, sole, and toe.	3½-200	1.000	.970	.150	.439	.318	.155	.116	1.028	.058	.....
33.....	E	South.	do.	Looped toe, double heel and toe.	3½-200	1.000	.963	.125	.467	.174	.108	.073	.822	.141	.....

COST AND PROFIT BY SPECIFIED UNITS.														
21.....	B	East.....	do.....	Sewed welt, looped toe, double heel and toe.	3½-220	1.000	.954	.125	.420	.255	.183	.063	.921	.083
48..... <td>A<td>do.....<td>do.....<td>Sewed welt, looped toe.<th>3½-176</th><th>1.000</th><th>.951</th><th>.150</th><th>.374</th><th>.365</th><th>.138</th><th>.051</th><th>.928</th><th>.023</th></td></td></td></td>	A <td>do.....<td>do.....<td>Sewed welt, looped toe.<th>3½-176</th><th>1.000</th><th>.951</th><th>.150</th><th>.374</th><th>.365</th><th>.138</th><th>.051</th><th>.928</th><th>.023</th></td></td></td>	do..... <td>do.....<td>Sewed welt, looped toe.<th>3½-176</th><th>1.000</th><th>.951</th><th>.150</th><th>.374</th><th>.365</th><th>.138</th><th>.051</th><th>.928</th><th>.023</th></td></td>	do..... <td>Sewed welt, looped toe.<th>3½-176</th><th>1.000</th><th>.951</th><th>.150</th><th>.374</th><th>.365</th><th>.138</th><th>.051</th><th>.928</th><th>.023</th></td>	Sewed welt, looped toe. <th>3½-176</th> <th>1.000</th> <th>.951</th> <th>.150</th> <th>.374</th> <th>.365</th> <th>.138</th> <th>.051</th> <th>.928</th> <th>.023</th>	3½-176	1.000	.951	.150	.374	.365	.138	.051	.928	.023
18..... <td>C<td>do.....<td>do.....<td>Sewed welt, looped toe, double heel and toe.<th>4-180</th><th>1.000</th><th>.944</th><th>.150</th><th>.367</th><th>.255</th><th>.116</th><th>.039</th><th>.917</th><th>.033</th></td></td></td></td>	C <td>do.....<td>do.....<td>Sewed welt, looped toe, double heel and toe.<th>4-180</th><th>1.000</th><th>.944</th><th>.150</th><th>.367</th><th>.255</th><th>.116</th><th>.039</th><th>.917</th><th>.033</th></td></td></td>	do..... <td>do.....<td>Sewed welt, looped toe, double heel and toe.<th>4-180</th><th>1.000</th><th>.944</th><th>.150</th><th>.367</th><th>.255</th><th>.116</th><th>.039</th><th>.917</th><th>.033</th></td></td>	do..... <td>Sewed welt, looped toe, double heel and toe.<th>4-180</th><th>1.000</th><th>.944</th><th>.150</th><th>.367</th><th>.255</th><th>.116</th><th>.039</th><th>.917</th><th>.033</th></td>	Sewed welt, looped toe, double heel and toe. <th>4-180</th> <th>1.000</th> <th>.944</th> <th>.150</th> <th>.367</th> <th>.255</th> <th>.116</th> <th>.039</th> <th>.917</th> <th>.033</th>	4-180	1.000	.944	.150	.367	.255	.116	.039	.917	.033
43..... <td>A<td>do.....<td>do.....<td>Sewed welt, looped toe, double heel and toe.<th>3½-200</th><th>.975</th><th>.955</th><th>.125</th><th>.358</th><th>.355</th><th>3.72</th><th>.089</th><th>1.174</th><th>.219</th></td></td></td></td>	A <td>do.....<td>do.....<td>Sewed welt, looped toe, double heel and toe.<th>3½-200</th><th>.975</th><th>.955</th><th>.125</th><th>.358</th><th>.355</th><th>3.72</th><th>.089</th><th>1.174</th><th>.219</th></td></td></td>	do..... <td>do.....<td>Sewed welt, looped toe, double heel and toe.<th>3½-200</th><th>.975</th><th>.955</th><th>.125</th><th>.358</th><th>.355</th><th>3.72</th><th>.089</th><th>1.174</th><th>.219</th></td></td>	do..... <td>Sewed welt, looped toe, double heel and toe.<th>3½-200</th><th>.975</th><th>.955</th><th>.125</th><th>.358</th><th>.355</th><th>3.72</th><th>.089</th><th>1.174</th><th>.219</th></td>	Sewed welt, looped toe, double heel and toe. <th>3½-200</th> <th>.975</th> <th>.955</th> <th>.125</th> <th>.358</th> <th>.355</th> <th>3.72</th> <th>.089</th> <th>1.174</th> <th>.219</th>	3½-200	.975	.955	.125	.358	.355	3.72	.089	1.174	.219
15..... <td>do.<td>do.....<td>do.....<td>Sewed welt, looped toe, double heel and toe.<th>3½-200</th><th>a 1.000</th><th>.975</th><th>.150</th><th>.430</th><th>.320</th><th>.183</th><th>.086</th><th>1.069</th><th>.063</th></td></td></td></td>	do. <td>do.....<td>do.....<td>Sewed welt, looped toe, double heel and toe.<th>3½-200</th><th>a 1.000</th><th>.975</th><th>.150</th><th>.430</th><th>.320</th><th>.183</th><th>.086</th><th>1.069</th><th>.063</th></td></td></td>	do..... <td>do.....<td>Sewed welt, looped toe, double heel and toe.<th>3½-200</th><th>a 1.000</th><th>.975</th><th>.150</th><th>.430</th><th>.320</th><th>.183</th><th>.086</th><th>1.069</th><th>.063</th></td></td>	do..... <td>Sewed welt, looped toe, double heel and toe.<th>3½-200</th><th>a 1.000</th><th>.975</th><th>.150</th><th>.430</th><th>.320</th><th>.183</th><th>.086</th><th>1.069</th><th>.063</th></td>	Sewed welt, looped toe, double heel and toe. <th>3½-200</th> <th>a 1.000</th> <th>.975</th> <th>.150</th> <th>.430</th> <th>.320</th> <th>.183</th> <th>.086</th> <th>1.069</th> <th>.063</th>	3½-200	a 1.000	.975	.150	.430	.320	.183	.086	1.069	.063
26..... <td>A<td>South.....<td>do.....<td>Sewed welt, looped toe, double heel and toe, high-spliced heel and toe, double sole.<th>220</th><th>.975</th><th>.943</th><th>.150</th><th>.457</th><th>.202</th><th>.160</th><th>.101</th><th>.920</th><th>.023</th></td></td></td></td>	A <td>South.....<td>do.....<td>Sewed welt, looped toe, double heel and toe, high-spliced heel and toe, double sole.<th>220</th><th>.975</th><th>.943</th><th>.150</th><th>.457</th><th>.202</th><th>.160</th><th>.101</th><th>.920</th><th>.023</th></td></td></td>	South..... <td>do.....<td>Sewed welt, looped toe, double heel and toe, high-spliced heel and toe, double sole.<th>220</th><th>.975</th><th>.943</th><th>.150</th><th>.457</th><th>.202</th><th>.160</th><th>.101</th><th>.920</th><th>.023</th></td></td>	do..... <td>Sewed welt, looped toe, double heel and toe, high-spliced heel and toe, double sole.<th>220</th><th>.975</th><th>.943</th><th>.150</th><th>.457</th><th>.202</th><th>.160</th><th>.101</th><th>.920</th><th>.023</th></td>	Sewed welt, looped toe, double heel and toe, high-spliced heel and toe, double sole. <th>220</th> <th>.975</th> <th>.943</th> <th>.150</th> <th>.457</th> <th>.202</th> <th>.160</th> <th>.101</th> <th>.920</th> <th>.023</th>	220	.975	.943	.150	.457	.202	.160	.101	.920	.023
28..... <td>D<td>do.....<td>do.....<td>Ribbed welt, looped toe, double heel and toe.<th>3½-176</th><th>.975</th><th>.943</th><th>.150</th><th>.478</th><th>.269</th><th>.161</th><th>.096</th><th>1.004</th><th>.061</th></td></td></td></td>	D <td>do.....<td>do.....<td>Ribbed welt, looped toe, double heel and toe.<th>3½-176</th><th>.975</th><th>.943</th><th>.150</th><th>.478</th><th>.269</th><th>.161</th><th>.096</th><th>1.004</th><th>.061</th></td></td></td>	do..... <td>do.....<td>Ribbed welt, looped toe, double heel and toe.<th>3½-176</th><th>.975</th><th>.943</th><th>.150</th><th>.478</th><th>.269</th><th>.161</th><th>.096</th><th>1.004</th><th>.061</th></td></td>	do..... <td>Ribbed welt, looped toe, double heel and toe.<th>3½-176</th><th>.975</th><th>.943</th><th>.150</th><th>.478</th><th>.269</th><th>.161</th><th>.096</th><th>1.004</th><th>.061</th></td>	Ribbed welt, looped toe, double heel and toe. <th>3½-176</th> <th>.975</th> <th>.943</th> <th>.150</th> <th>.478</th> <th>.269</th> <th>.161</th> <th>.096</th> <th>1.004</th> <th>.061</th>	3½-176	.975	.943	.150	.478	.269	.161	.096	1.004	.061
17..... <td>B<td>East.....<td>do.....<td>Sewed welt, looped toe, double heel and toe.<th>3½-196</th><th>.975</th><th>.926</th><th>.125</th><th>.419</th><th>.368</th><th>.180</th><th>.048</th><th>1.015</th><th>.089</th></td></td></td></td>	B <td>East.....<td>do.....<td>Sewed welt, looped toe, double heel and toe.<th>3½-196</th><th>.975</th><th>.926</th><th>.125</th><th>.419</th><th>.368</th><th>.180</th><th>.048</th><th>1.015</th><th>.089</th></td></td></td>	East..... <td>do.....<td>Sewed welt, looped toe, double heel and toe.<th>3½-196</th><th>.975</th><th>.926</th><th>.125</th><th>.419</th><th>.368</th><th>.180</th><th>.048</th><th>1.015</th><th>.089</th></td></td>	do..... <td>Sewed welt, looped toe, double heel and toe.<th>3½-196</th><th>.975</th><th>.926</th><th>.125</th><th>.419</th><th>.368</th><th>.180</th><th>.048</th><th>1.015</th><th>.089</th></td>	Sewed welt, looped toe, double heel and toe. <th>3½-196</th> <th>.975</th> <th>.926</th> <th>.125</th> <th>.419</th> <th>.368</th> <th>.180</th> <th>.048</th> <th>1.015</th> <th>.089</th>	3½-196	.975	.926	.125	.419	.368	.180	.048	1.015	.089
19..... <td>A<td>do.....<td>do.....<td>Sewed welt, looped toe, high splice, double heel, sole, and toe.<th>3½-220</th><th>.950</th><th>.926</th><th>.125</th><th>.416</th><th>.265</th><th>.133</th><th>.074</th><th>.888</th><th>.083</th></td></td></td></td>	A <td>do.....<td>do.....<td>Sewed welt, looped toe, high splice, double heel, sole, and toe.<th>3½-220</th><th>.950</th><th>.926</th><th>.125</th><th>.416</th><th>.265</th><th>.133</th><th>.074</th><th>.888</th><th>.083</th></td></td></td>	do..... <td>do.....<td>Sewed welt, looped toe, high splice, double heel, sole, and toe.<th>3½-220</th><th>.950</th><th>.926</th><th>.125</th><th>.416</th><th>.265</th><th>.133</th><th>.074</th><th>.888</th><th>.083</th></td></td>	do..... <td>Sewed welt, looped toe, high splice, double heel, sole, and toe.<th>3½-220</th><th>.950</th><th>.926</th><th>.125</th><th>.416</th><th>.265</th><th>.133</th><th>.074</th><th>.888</th><th>.083</th></td>	Sewed welt, looped toe, high splice, double heel, sole, and toe. <th>3½-220</th> <th>.950</th> <th>.926</th> <th>.125</th> <th>.416</th> <th>.265</th> <th>.133</th> <th>.074</th> <th>.888</th> <th>.083</th>	3½-220	.950	.926	.125	.416	.265	.133	.074	.888	.083
23..... <td>A<td>do.....<td>do.....<td>Integral welt, looped toe, double heel, sole, and toe.<th>220</th><th>.950</th><th>.919</th><th>.125</th><th>.441</th><th>.365</th><th>.147</th><th>.070</th><th>1.023</th><th>.104</th></td></td></td></td>	A <td>do.....<td>do.....<td>Integral welt, looped toe, double heel, sole, and toe.<th>220</th><th>.950</th><th>.919</th><th>.125</th><th>.441</th><th>.365</th><th>.147</th><th>.070</th><th>1.023</th><th>.104</th></td></td></td>	do..... <td>do.....<td>Integral welt, looped toe, double heel, sole, and toe.<th>220</th><th>.950</th><th>.919</th><th>.125</th><th>.441</th><th>.365</th><th>.147</th><th>.070</th><th>1.023</th><th>.104</th></td></td>	do..... <td>Integral welt, looped toe, double heel, sole, and toe.<th>220</th><th>.950</th><th>.919</th><th>.125</th><th>.441</th><th>.365</th><th>.147</th><th>.070</th><th>1.023</th><th>.104</th></td>	Integral welt, looped toe, double heel, sole, and toe. <th>220</th> <th>.950</th> <th>.919</th> <th>.125</th> <th>.441</th> <th>.365</th> <th>.147</th> <th>.070</th> <th>1.023</th> <th>.104</th>	220	.950	.919	.125	.441	.365	.147	.070	1.023	.104
18..... <td>B<td>do.....<td>do.....<td>Sewed welt, looped toe, double heel and toe.<th>4-220</th><th>.900</th><th>.849</th><th>.100</th><th>.475</th><th>.265</th><th>.110</th><th>.035</th><th>.855</th><th>.006</th></td></td></td></td>	B <td>do.....<td>do.....<td>Sewed welt, looped toe, double heel and toe.<th>4-220</th><th>.900</th><th>.849</th><th>.100</th><th>.475</th><th>.265</th><th>.110</th><th>.035</th><th>.855</th><th>.006</th></td></td></td>	do..... <td>do.....<td>Sewed welt, looped toe, double heel and toe.<th>4-220</th><th>.900</th><th>.849</th><th>.100</th><th>.475</th><th>.265</th><th>.110</th><th>.035</th><th>.855</th><th>.006</th></td></td>	do..... <td>Sewed welt, looped toe, double heel and toe.<th>4-220</th><th>.900</th><th>.849</th><th>.100</th><th>.475</th><th>.265</th><th>.110</th><th>.035</th><th>.855</th><th>.006</th></td>	Sewed welt, looped toe, double heel and toe. <th>4-220</th> <th>.900</th> <th>.849</th> <th>.100</th> <th>.475</th> <th>.265</th> <th>.110</th> <th>.035</th> <th>.855</th> <th>.006</th>	4-220	.900	.849	.100	.475	.265	.110	.035	.855	.006
13..... <td>C<td>do.....<td>do.....<td>Sewed welt, looped toe, double heel, sole, and toe.<th>3½-220</th><th>.855</th><th>.812</th><th>.125</th><th>.411</th><th>.215</th><th>.117</th><th>.028</th><th>.771</th><th>.041</th></td></td></td></td>	C <td>do.....<td>do.....<td>Sewed welt, looped toe, double heel, sole, and toe.<th>3½-220</th><th>.855</th><th>.812</th><th>.125</th><th>.411</th><th>.215</th><th>.117</th><th>.028</th><th>.771</th><th>.041</th></td></td></td>	do..... <td>do.....<td>Sewed welt, looped toe, double heel, sole, and toe.<th>3½-220</th><th>.855</th><th>.812</th><th>.125</th><th>.411</th><th>.215</th><th>.117</th><th>.028</th><th>.771</th><th>.041</th></td></td>	do..... <td>Sewed welt, looped toe, double heel, sole, and toe.<th>3½-220</th><th>.855</th><th>.812</th><th>.125</th><th>.411</th><th>.215</th><th>.117</th><th>.028</th><th>.771</th><th>.041</th></td>	Sewed welt, looped toe, double heel, sole, and toe. <th>3½-220</th> <th>.855</th> <th>.812</th> <th>.125</th> <th>.411</th> <th>.215</th> <th>.117</th> <th>.028</th> <th>.771</th> <th>.041</th>	3½-220	.855	.812	.125	.411	.215	.117	.028	.771	.041
28..... <td>C<td>South.....<td>do.....<td>Ribbed welt, looped toe, double heel and toe.<th>3½-176</th><th>.825</th><th>.798</th><th>.100</th><th>.394</th><th>.249</th><th>.149</th><th>.082</th><th>.874</th><th>.076</th></td></td></td></td>	C <td>South.....<td>do.....<td>Ribbed welt, looped toe, double heel and toe.<th>3½-176</th><th>.825</th><th>.798</th><th>.100</th><th>.394</th><th>.249</th><th>.149</th><th>.082</th><th>.874</th><th>.076</th></td></td></td>	South..... <td>do.....<td>Ribbed welt, looped toe, double heel and toe.<th>3½-176</th><th>.825</th><th>.798</th><th>.100</th><th>.394</th><th>.249</th><th>.149</th><th>.082</th><th>.874</th><th>.076</th></td></td>	do..... <td>Ribbed welt, looped toe, double heel and toe.<th>3½-176</th><th>.825</th><th>.798</th><th>.100</th><th>.394</th><th>.249</th><th>.149</th><th>.082</th><th>.874</th><th>.076</th></td>	Ribbed welt, looped toe, double heel and toe. <th>3½-176</th> <th>.825</th> <th>.798</th> <th>.100</th> <th>.394</th> <th>.249</th> <th>.149</th> <th>.082</th> <th>.874</th> <th>.076</th>	3½-176	.825	.798	.100	.394	.249	.149	.082	.874	.076
21..... <td>A<td>East.....<td>do.....<td>Sewed welt, looped toe, double heel and toe.<th>3½-200</th><th>.800</th><th>.763</th><th>.100</th><th>.320</th><th>.189</th><th>.138</th><th>.051</th><th>.698</th><th>.065</th></td></td></td></td>	A <td>East.....<td>do.....<td>Sewed welt, looped toe, double heel and toe.<th>3½-200</th><th>.800</th><th>.763</th><th>.100</th><th>.320</th><th>.189</th><th>.138</th><th>.051</th><th>.698</th><th>.065</th></td></td></td>	East..... <td>do.....<td>Sewed welt, looped toe, double heel and toe.<th>3½-200</th><th>.800</th><th>.763</th><th>.100</th><th>.320</th><th>.189</th><th>.138</th><th>.051</th><th>.698</th><th>.065</th></td></td>	do..... <td>Sewed welt, looped toe, double heel and toe.<th>3½-200</th><th>.800</th><th>.763</th><th>.100</th><th>.320</th><th>.189</th><th>.138</th><th>.051</th><th>.698</th><th>.065</th></td>	Sewed welt, looped toe, double heel and toe. <th>3½-200</th> <th>.800</th> <th>.763</th> <th>.100</th> <th>.320</th> <th>.189</th> <th>.138</th> <th>.051</th> <th>.698</th> <th>.065</th>	3½-200	.800	.763	.100	.320	.189	.138	.051	.698	.065
17..... <td>A<td>do.....<td>do.....<td>Sewed welt, heel and toe.<th>3½-176</th><th>.775</th><th>.736</th><th>.100</th><th>.328</th><th>.241</th><th>.118</th><th>.039</th><th>.726</th><th>.010</th></td></td></td></td>	A <td>do.....<td>do.....<td>Sewed welt, heel and toe.<th>3½-176</th><th>.775</th><th>.736</th><th>.100</th><th>.328</th><th>.241</th><th>.118</th><th>.039</th><th>.726</th><th>.010</th></td></td></td>	do..... <td>do.....<td>Sewed welt, heel and toe.<th>3½-176</th><th>.775</th><th>.736</th><th>.100</th><th>.328</th><th>.241</th><th>.118</th><th>.039</th><th>.726</th><th>.010</th></td></td>	do..... <td>Sewed welt, heel and toe.<th>3½-176</th><th>.775</th><th>.736</th><th>.100</th><th>.328</th><th>.241</th><th>.118</th><th>.039</th><th>.726</th><th>.010</th></td>	Sewed welt, heel and toe. <th>3½-176</th> <th>.775</th> <th>.736</th> <th>.100</th> <th>.328</th> <th>.241</th> <th>.118</th> <th>.039</th> <th>.726</th> <th>.010</th>	3½-176	.775	.736	.100	.328	.241	.118	.039	.726	.010
13..... <td>B<td>do.....<td>do.....<td>Sewed welt, looped toe, double heel, sole, and toe.<th>3½-220</th><th>.750</th><th>.712</th><th>.100</th><th>.356</th><th>.200</th><th>.109</th><th>.026</th><th>.691</th><th>.021</th></td></td></td></td>	B <td>do.....<td>do.....<td>Sewed welt, looped toe, double heel, sole, and toe.<th>3½-220</th><th>.750</th><th>.712</th><th>.100</th><th>.356</th><th>.200</th><th>.109</th><th>.026</th><th>.691</th><th>.021</th></td></td></td>	do..... <td>do.....<td>Sewed welt, looped toe, double heel, sole, and toe.<th>3½-220</th><th>.750</th><th>.712</th><th>.100</th><th>.356</th><th>.200</th><th>.109</th><th>.026</th><th>.691</th><th>.021</th></td></td>	do..... <td>Sewed welt, looped toe, double heel, sole, and toe.<th>3½-220</th><th>.750</th><th>.712</th><th>.100</th><th>.356</th><th>.200</th><th>.109</th><th>.026</th><th>.691</th><th>.021</th></td>	Sewed welt, looped toe, double heel, sole, and toe. <th>3½-220</th> <th>.750</th> <th>.712</th> <th>.100</th> <th>.356</th> <th>.200</th> <th>.109</th> <th>.026</th> <th>.691</th> <th>.021</th>	3½-220	.750	.712	.100	.356	.200	.109	.026	.691	.021
37..... <td>A<td>South.....<td>do.....<td>Sewed welt, looped toe, double heel and toe.<th>3½-176</th><th>1.000</th><th>.683</th><th>.100</th><th>.343</th><th>.151</th><th>.101</th><th>.018</th><th>.583</th><th>.110</th></td></td></td></td>	A <td>South.....<td>do.....<td>Sewed welt, looped toe, double heel and toe.<th>3½-176</th><th>1.000</th><th>.683</th><th>.100</th><th>.343</th><th>.151</th><th>.101</th><th>.018</th><th>.583</th><th>.110</th></td></td></td>	South..... <td>do.....<td>Sewed welt, looped toe, double heel and toe.<th>3½-176</th><th>1.000</th><th>.683</th><th>.100</th><th>.343</th><th>.151</th><th>.101</th><th>.018</th><th>.583</th><th>.110</th></td></td>	do..... <td>Sewed welt, looped toe, double heel and toe.<th>3½-176</th><th>1.000</th><th>.683</th><th>.100</th><th>.343</th><th>.151</th><th>.101</th><th>.018</th><th>.583</th><th>.110</th></td>	Sewed welt, looped toe, double heel and toe. <th>3½-176</th> <th>1.000</th> <th>.683</th> <th>.100</th> <th>.343</th> <th>.151</th> <th>.101</th> <th>.018</th> <th>.583</th> <th>.110</th>	3½-176	1.000	.683	.100	.343	.151	.101	.018	.583	.110
30..... <td>A<td>do.....<td>do.....<td>Sewed welt, looped toe, double heel and toe.<th>3½-176</th><th>.700</th><th>.690</th><th>.100</th><th>.346</th><th>.150</th><th>.116</th><th>.028</th><th>.637</th><th>.033</th></td></td></td></td>	A <td>do.....<td>do.....<td>Sewed welt, looped toe, double heel and toe.<th>3½-176</th><th>.700</th><th>.690</th><th>.100</th><th>.346</th><th>.150</th><th>.116</th><th>.028</th><th>.637</th><th>.033</th></td></td></td>	do..... <td>do.....<td>Sewed welt, looped toe, double heel and toe.<th>3½-176</th><th>.700</th><th>.690</th><th>.100</th><th>.346</th><th>.150</th><th>.116</th><th>.028</th><th>.637</th><th>.033</th></td></td>	do..... <td>Sewed welt, looped toe, double heel and toe.<th>3½-176</th><th>.700</th><th>.690</th><th>.100</th><th>.346</th><th>.150</th><th>.116</th><th>.028</th><th>.637</th><th>.033</th></td>	Sewed welt, looped toe, double heel and toe. <th>3½-176</th> <th>.700</th> <th>.690</th> <th>.100</th> <th>.346</th> <th>.150</th> <th>.116</th> <th>.028</th> <th>.637</th> <th>.033</th>	3½-176	.700	.690	.100	.346	.150	.116	.028	.637	.033
40..... <td>B<td>do.....<td>do.....<td>do.<th>176</th><th>.675</th><th>.662</th><th>.100</th><th>.379</th><th>.173</th><th>.128</th><th>.027</th><th>.707</th><th>.045</th></td></td></td></td>	B <td>do.....<td>do.....<td>do.<th>176</th><th>.675</th><th>.662</th><th>.100</th><th>.379</th><th>.173</th><th>.128</th><th>.027</th><th>.707</th><th>.045</th></td></td></td>	do..... <td>do.....<td>do.<th>176</th><th>.675</th><th>.662</th><th>.100</th><th>.379</th><th>.173</th><th>.128</th><th>.027</th><th>.707</th><th>.045</th></td></td>	do..... <td>do.<th>176</th><th>.675</th><th>.662</th><th>.100</th><th>.379</th><th>.173</th><th>.128</th><th>.027</th><th>.707</th><th>.045</th></td>	do. <th>176</th> <th>.675</th> <th>.662</th> <th>.100</th> <th>.379</th> <th>.173</th> <th>.128</th> <th>.027</th> <th>.707</th> <th>.045</th>	176	.675	.662	.100	.379	.173	.128	.027	.707	.045
34..... <td>E<td>do.....<td>do.....<td>Servage top, sewed toe, integral welt, sewed heel and toe.<th>84</th><th>.650</th><th>.643</th><th>.100</th><th>.462</th><th>.049</th><th>.063</th><th>.022</th><th>.626</th><th>.017</th></td></td></td></td>	E <td>do.....<td>do.....<td>Servage top, sewed toe, integral welt, sewed heel and toe.<th>84</th><th>.650</th><th>.643</th><th>.100</th><th>.462</th><th>.049</th><th>.063</th><th>.022</th><th>.626</th><th>.017</th></td></td></td>	do..... <td>do.....<td>Servage top, sewed toe, integral welt, sewed heel and toe.<th>84</th><th>.650</th><th>.643</th><th>.100</th><th>.462</th><th>.049</th><th>.063</th><th>.022</th><th>.626</th><th>.017</th></td></td>	do..... <td>Servage top, sewed toe, integral welt, sewed heel and toe.<th>84</th><th>.650</th><th>.643</th><th>.100</th><th>.462</th><th>.049</th><th>.063</th><th>.022</th><th>.626</th><th>.017</th></td>	Servage top, sewed toe, integral welt, sewed heel and toe. <th>84</th> <th>.650</th> <th>.643</th> <th>.100</th> <th>.462</th> <th>.049</th> <th>.063</th> <th>.022</th> <th>.626</th> <th>.017</th>	84	.650	.643	.100	.462	.049	.063	.022	.626	.017
62..... <td>B<td>East.....<td>do.....<td>Integral welt, sewed heel and toe.<th>4-176</th><th>.625</th><th>.600</th><th>.100</th><th>.301</th><th>.195</th><th>.088</th><th>.045</th><th>.629</th><th>.029</th></td></td></td></td>	B <td>East.....<td>do.....<td>Integral welt, sewed heel and toe.<th>4-176</th><th>.625</th><th>.600</th><th>.100</th><th>.301</th><th>.195</th><th>.088</th><th>.045</th><th>.629</th><th>.029</th></td></td></td>	East..... <td>do.....<td>Integral welt, sewed heel and toe.<th>4-176</th><th>.625</th><th>.600</th><th>.100</th><th>.301</th><th>.195</th><th>.088</th><th>.045</th><th>.629</th><th>.029</th></td></td>	do..... <td>Integral welt, sewed heel and toe.<th>4-176</th><th>.625</th><th>.600</th><th>.100</th><th>.301</th><th>.195</th><th>.088</th><th>.045</th><th>.629</th><th>.029</th></td>	Integral welt, sewed heel and toe. <th>4-176</th> <th>.625</th> <th>.600</th> <th>.100</th> <th>.301</th> <th>.195</th> <th>.088</th> <th>.045</th> <th>.629</th> <th>.029</th>	4-176	.625	.600	.100	.301	.195	.088	.045	.629	.029
34..... <td>D<td>South.....<td>do.....<td>Servage top, sewed toe, spliced heel and toe.<th>84</th><th>.600</th><th>.588</th><th>.100</th><th>.410</th><th>.049</th><th>.057</th><th>.048</th><th>.564</th><th>.030</th></td></td></td></td>	D <td>South.....<td>do.....<td>Servage top, sewed toe, spliced heel and toe.<th>84</th><th>.600</th><th>.588</th><th>.100</th><th>.410</th><th>.049</th><th>.057</th><th>.048</th><th>.564</th><th>.030</th></td></td></td>	South..... <td>do.....<td>Servage top, sewed toe, spliced heel and toe.<th>84</th><th>.600</th><th>.588</th><th>.100</th><th>.410</th><th>.049</th><th>.057</th><th>.048</th><th>.564</th><th>.030</th></td></td>	do..... <td>Servage top, sewed toe, spliced heel and toe.<th>84</th><th>.600</th><th>.588</th><th>.100</th><th>.410</th><th>.049</th><th>.057</th><th>.048</th><th>.564</th><th>.030</th></td>	Servage top, sewed toe, spliced heel and toe. <th>84</th> <th>.600</th> <th>.588</th> <th>.100</th> <th>.410</th> <th>.049</th> <th>.057</th> <th>.048</th> <th>.564</th> <th>.030</th>	84	.600	.588	.100	.410	.049	.057	.048	.564	.030
27..... <td>C<td>do.....<td>do.....<td>do.<th>3½-200</th><th>.600</th><th>.588</th><th>.150</th><th>.430</th><th>.080</th><th>.065</th><th>.014</th><th>.589</th><th>.001</th></td></td></td></td>	C <td>do.....<td>do.....<td>do.<th>3½-200</th><th>.600</th><th>.588</th><th>.150</th><th>.430</th><th>.080</th><th>.065</th><th>.014</th><th>.589</th><th>.001</th></td></td></td>	do..... <td>do.....<td>do.<th>3½-200</th><th>.600</th><th>.588</th><th>.150</th><th>.430</th><th>.080</th><th>.065</th><th>.014</th><th>.589</th><th>.001</th></td></td>	do..... <td>do.<th>3½-200</th><th>.600</th><th>.588</th><th>.150</th><th>.430</th><th>.080</th><th>.065</th><th>.014</th><th>.589</th><th>.001</th></td>	do. <th>3½-200</th> <th>.600</th> <th>.588</th> <th>.150</th> <th>.430</th> <th>.080</th> <th>.065</th> <th>.014</th> <th>.589</th> <th>.001</th>	3½-200	.600	.588	.150	.430	.080	.065	.014	.589	.001
14..... <td>A<td>do.....<td>do.....<td>Sewed welt, looped toe, double heel, sole, and toe.<th>3½-200</th><th>.600</th><th>.588</th><th>.150</th><th>.410</th><th>.100</th><th>.066</th><th>.014</th><th>.590</th><th>.002</th></td></td></td></td>	A <td>do.....<td>do.....<td>Sewed welt, looped toe, double heel, sole, and toe.<th>3½-200</th><th>.600</th><th>.588</th><th>.150</th><th>.410</th><th>.100</th><th>.066</th><th>.014</th><th>.590</th><th>.002</th></td></td></td>	do..... <td>do.....<td>Sewed welt, looped toe, double heel, sole, and toe.<th>3½-200</th><th>.600</th><th>.588</th><th>.150</th><th>.410</th><th>.100</th><th>.066</th><th>.014</th><th>.590</th><th>.002</th></td></td>	do..... <td>Sewed welt, looped toe, double heel, sole, and toe.<th>3½-200</th><th>.600</th><th>.588</th><th>.150</th><th>.410</th><th>.100</th><th>.066</th><th>.014</th><th>.590</th><th>.002</th></td>	Sewed welt, looped toe, double heel, sole, and toe. <th>3½-200</th> <th>.600</th> <th>.588</th> <th>.150</th> <th>.410</th> <th>.100</th> <th>.066</th> <th>.014</th> <th>.590</th> <th>.002</th>	3½-200	.600	.588	.150	.410	.100	.066	.014	.590	.002
38..... <td>C<td>West.....<td>Misses.....<td>Servage top, looped toe, double heel and toe, size 7.<th>3½-176</th><th>a .425</th><th>.343</th><th>.050</th><th>.172</th><th>.127</th><th>.080</th><th>.010</th><th>.389</th><th>.046</th></td></td></td></td>	C <td>West.....<td>Misses.....<td>Servage top, looped toe, double heel and toe, size 7.<th>3½-176</th><th>a .425</th><th>.343</th><th>.050</th><th>.172</th><th>.127</th><th>.080</th><th>.010</th><th>.389</th><th>.046</th></td></td></td>	West..... <td>Misses.....<td>Servage top, looped toe, double heel and toe, size 7.<th>3½-176</th><th>a .425</th><th>.343</th><th>.050</th><th>.172</th><th>.127</th><th>.080</th><th>.010</th><th>.389</th><th>.046</th></td></td>	Misses..... <td>Servage top, looped toe, double heel and toe, size 7.<th>3½-176</th><th>a .425</th><th>.343</th><th>.050</th><th>.172</th><th>.127</th><th>.080</th><th>.010</th><th>.389</th><th>.046</th></td>	Servage top, looped toe, double heel and toe, size 7. <th>3½-176</th> <th>a .425</th> <th>.343</th> <th>.050</th> <th>.172</th> <th>.127</th> <th>.080</th> <th>.010</th> <th>.389</th> <th>.046</th>	3½-176	a .425	.343	.050	.172	.127	.080	.010	.389	.046
18..... <td>A<td>East.....<td>do.....<td>Ribbed welt, looped toe, double heel and toe.<th>3½-256</th><th>1.430</th><th>1.415</th><th>.250</th><th>.563</th><th>.365</th><th>.120</th><th>.063</th><th>1.141</th><th>.274</th></td></td></td></td>	A <td>East.....<td>do.....<td>Ribbed welt, looped toe, double heel and toe.<th>3½-256</th><th>1.430</th><th>1.415</th><th>.250</th><th>.563</th><th>.365</th><th>.120</th><th>.063</th><th>1.141</th><th>.274</th></td></td></td>	East..... <td>do.....<td>Ribbed welt, looped toe, double heel and toe.<th>3½-256</th><th>1.430</th><th>1.415</th><th>.250</th><th>.563</th><th>.365</th><th>.120</th><th>.063</th><th>1.141</th><th>.274</th></td></td>	do..... <td>Ribbed welt, looped toe, double heel and toe.<th>3½-256</th><th>1.430</th><th>1.415</th><th>.250</th><th>.563</th><th>.365</th><th>.120</th><th>.063</th><th>1.141</th><th>.274</th></td>	Ribbed welt, looped toe, double heel and toe. <th>3½-256</th> <th>1.430</th> <th>1.415</th> <th>.250</th> <th>.563</th> <th>.365</th> <th>.120</th> <th>.063</th> <th>1.141</th> <th>.274</th>	3½-256	1.430	1.415	.250	.563	.365	.120	.063	1.141	.274
37..... <td>C<td>South.....<td>do.....<td>Sewed welt, looped toe, double heel and toe.<th>3½-132</th><th>1.000</th><th>.944</th><th>.150</th><th>.399</th><th>.365</th><th>.154</th><th>.039</th><th>.957</th><th>.013</th></td></td></td></td>	C <td>South.....<td>do.....<td>Sewed welt, looped toe, double heel and toe.<th>3½-132</th><th>1.000</th><th>.944</th><th>.150</th><th>.399</th><th>.365</th><th>.154</th><th>.039</th><th>.957</th><th>.013</th></td></td></td>	South..... <td>do.....<td>Sewed welt, looped toe, double heel and toe.<th>3½-132</th><th>1.000</th><th>.944</th><th>.150</th><th>.399</th><th>.365</th><th>.154</th><th>.039</th><th>.957</th><th>.013</th></td></td>	do..... <td>Sewed welt, looped toe, double heel and toe.<th>3½-132</th><th>1.000</th><th>.944</th><th>.150</th><th>.399</th><th>.365</th><th>.154</th><th>.039</th><th>.957</th><th>.013</th></td>	Sewed welt, looped toe, double heel and toe. <th>3½-132</th> <th>1.000</th> <th>.944</th> <th>.150</th> <th>.399</th> <th>.365</th> <th>.154</th> <th>.039</th> <th>.957</th> <th>.013</th>	3½-132	1.000	.944	.150	.399	.365	.154	.039	.957	.013
				do. <th>110</th> <th>.675</th> <th>.663</th> <th>.100</th> <th>.276</th> <th>.193</th> <th>.093</th> <th>.018</th> <th>.580</th> <th>.088</th>	110	.675	.663	.100	.276	.193	.093	.018	.580	.088

a Gross price of 1 dozen pairs sold to retailers.

TABLE 51.—COST OF PRODUCTION, SELLING PRICE, AND PROFIT OR LOSS, PER DOZEN PAIRS OF HOSE SOLD TO JOBBERS AND COMMISSION HOUSES—Continued.

Estab-lish-ments.	Style.	Local-ity.	Made for—	Description.	Number of needles.	Gross price per dozen pairs.	Net price per dozen pairs.	Usual re-tail price per pair.	Cost per dozen pairs.				Manufacturing profit or loss.	
									Net cost of all materials.	Direct labor.	Indirect labor and factory expense.	Adminis-trative and selling expense.	Total cost.	Profit.
30.....	C	South.	Misses....	Looped toe, spliced heel and toe, size 7.	110	\$0.675	\$0.666	\$0.100	\$0.276	\$0.183	\$0.150	\$0.026	\$0.645	\$0.021
28.....	B	West....	Children	Looped toe, double heel and toe.	3½-164	1.060	1.016	.150	.567	.254	.152	.104	1.077	\$0.061
38.....	A	West....	Children	Savage top, looped toe, double heel and toe, size 7.	3½-222	.910	.901	.150	.458	.348	.114	.040	.960	.059
28.....	A	South....	Children	Looped toe, double knee, heel and toe.	3½-176	.775	.750	.100	.379	.219	.131	.077	.806	.056
40.....	C	South....	Children	Looped toe, spliced heel and toe.	.....	.675	.661	.100	.315	.206	.137	.026	.684	.023
50.....	C	East....	Infants....	Sewed welt, looped toe.	3½-184	1.500	1.513	.250	.672	.380	.181	.106	1.339	.174
42.....	B	East....	Infants....	Ribbed welt, looped toe.	3½-184	1.000	.983	.150	.413	.254	.133	.106	1.000	.085
50.....	B	East....	Infants....	Sewed welt, looped toe.	3½-184	.950	.928	.125	.345	.235	.129	.085	.919	.069
33.....	D	South....	Children	Looped toe, double heel and toe.	3½-220	.925	.890	.150	.285	.196	.113	.068	.662	.228
23.....	E	East....	Children	Ribbed welt, looped toe.	220	.894	.894	.125	.343	.325	.118	.067	.833	.041
33.....	C	South....	Children	Looped toe, double heel and toe.	220	.750	.722	.100	.166	.201	.114	.055	.586	.186
23.....	C	East....	Children	Ribbed welt, looped toe, double heel, sole, and toe.	220	.700	.677	.100	.196	.330	.117	.051	.694	.017
50.....	A	East....	Children	Sewed welt, looped toe.	2½-116	.675	.659	.100	.171	.245	.123	.045	.584	.049
42.....	A	East....	Children	Ribbed welt, looped toe, shingle heel, sole, and toe.	2½-110	.625	.613	.100	.131	.220	.113	.045	.564	.045
23.....	D	East....	Children	Ribbed welt, sewed heel and toe, shingled, sole, and toe.	220	.450	.435	.050	.122	.150	.066	.033	.361	.074

## SEAMLESS, WOOL OR WOOL AND COTTON MIXED.

71.....	B	East.	Men....	Ribbed top, looped toe, double heel.	3½-120	\$1.800	\$1.710	\$0.250	\$0.949	\$0.382	\$0.213	\$0.109	\$1.633	\$0.047
70.....	D	East.	Men....	Plated cotton and wool, ribbed top, looped toe, double heel.	3½-124	1.750	1.703	.250	.854	.378	.258	.161	1.651	.052
71.....	D	East.	Men....	Plated cotton and wool, ribbed top, looped toe, double heel.	3½-160	1.750	1.662	.250	.744	.362	.211	.106	1.423	.239

69.....	A	East.	Men....	Ribbed top, looped toe.	3½-160	1.700	1.470	.250	.912	.375	.115	.110	1.512	.187
70.....	B	East.	Men....	Ribbed top, looped toe, double heel.	3½-200	1.650	1.605	.250	.556	.390	.320	.152	1.418	.050
70.....	B	East.	Men....	do.	3½-160	1.600	1.557	.250	.851	.365	.244	.147	1.607	.092
70.....	B	East.	Men....	do.	3½-124	1.575	1.522	.250	.784	.365	.244	.145	1.440	.027
70.....	C	East.	Men....	do.	3½-124	1.575	1.522	.250	.784	.365	.244	.145	1.440	.027
71.....	A	East.	Men....	Ribbed top, looped toe.	3½-108	1.000	1.000	.100	.418	.236	.172	.064	1.001	.001
67.....	C	East.	Men....	Ribbed top, looped toe, double heel and toe.	.....	1.000	.950	.150	.435	.236	.100	.134	.905	.045
67.....	A	East.	Men....	do.	.....	.950	.902	.150	.385	.230	.097	.127	.840	.053
67.....	B	East.	Men....	do.	.....	.950	.902	.150	.385	.230	.097	.127	.840	.053
71.....	C	East.	Men....	Ribbed top, looped toe.	3½-160	.875	.850	.125	.324	.314	.154	.056	.842	.033
66.....	C	East.	Men....	do.	.....	.850	.820	.125	.324	.245	.112	.109	.790	.060
66.....	C	East.	Men....	do.	.....	.850	.820	.125	.324	.245	.112	.109	.790	.060
66.....	C	East.	Men....	do.	.....	.850	.820	.125	.324	.245	.112	.109	.790	.060
66.....	C	East.	Men....	do.	.....	.850	.820	.125	.324	.245	.112	.109	.790	.060
66.....	C	East.	Men....	do.	.....	.850	.820	.125	.324	.245	.112	.109	.790	.060
71.....	E	East.	Women.	Integral welt, cuff top, looped toe, double heel.	3½-160	1.900	1.805	.250	.986	.491	.267	.115	1.859	.054
69.....	C	East.	Men....	Integral welt, looped toe.	3½-124	1.900	1.643	.250	.997	.392	.131	.123	1.643	.288
70.....	F	East.	Men....	Integral welt, looped toe, double heel.	3½-120	1.750	1.703	.250	1.127	.420	.283	.161	1.991	.001
71.....	F	East.	Men....	Integral welt, looped toe.	3½-160	1.600	1.600	.250	.636	.374	.184	.102	1.286	.304
69.....	D	East.	Men....	Integral welt, looped toe.	3½-124	1.250	1.131	.150	.658	.375	.208	.106	1.226	.065
4.....	D	East.	Children	Ribbed leg, looped plain foot, looped toe.	3½-180	1.850	1.731	.250	.722	.370	.208	.104	1.466	.325
4.....	C	East.	Infants....	Ribbed top, looped toe.	2½-200	1.925	1.798	.250	.829	.390	.213	.104	1.536	.172
69.....	E	East.	Men....	Ribbed top, looped toe.	2½-86	1.050	.968	.125	.494	.327	.090	.087	.978	.070
69.....	F	East.	Men....	do.	2½-72	.650	.588	.100	.201	.256	.071	.044	.572	.016

## SEAMLESS, ARTIFICIAL SILK.

47.....	A	East.	Men....	Artificial silk, plated, ribbed top, looped toe, high splice, double heel and toe.	3½-220	\$1.850	\$1.813	\$0.250	\$0.917	\$0.465	\$0.205	\$0.112	\$0.699	\$0.114
56.....	C	West.	Men....	Artificial silk, plated, ribbed top, looped toe, high splice, double heel, sole, and toe.	3½-220	1.850	1.804	.250	1.263	.410	.302	.176	2.151	\$0.347
8.....	C	East.	Men....	Artificial silk, ribbed top, looped toe, high splice, double heel, sole, and toe.	3½-224	1.825	1.784	.350	.963	.460	.134	.093	1.650	.134
52.....	E	East.	Women.	Artificial silk, ribbed top, looped toe, high splice, double heel, sole, and toe.	3½-220	3.500	3.410	.500	1.783	.584	.397	.380	3.144	.286
52.....	D	East.	Men....	Artificial silk, integral welt, looped toe, high splice, double heel and toe.	3½-200	1.850	1.802	.250	.963	.456	.270	.201	1.830	.028



## COST AND PROFIT OF UNITS SOLD TO JOBBERS.

Table 51 is in the exact form of Table 50, but it shows the cost of production, selling expense, and profits on units of one dozen pairs of hose sold to jobbers instead of retailers. The bulk of the product in this branch of the industry is sold to jobbers. Comparison of Table 50 with Table 51 shows losses on a greater proportion of styles sold to jobbers than on styles sold to retailers. This is accounted for by the fact that goods are sold cheaper to jobbers than to retailers. Jobbers, however, do not receive as much discount or time allowance for payments with discount as retailers do. Jobbers by paying for goods within 10 days enable the manufacturers to turn over their money rapidly, much more rapidly than if they sold to retailers who paid in 10-60 (i. e., 70) days from date of invoice.

Table 50 shows for different styles of hosiery the principal items of cost and the manufacturing profit or loss. The data for each style are arranged in the following order:

1. According to the styles shown in Table 49.
2. Hosiery for men; hosiery for women.
3. Hosiery for men and women, arranged according to the gross selling price to retailers, the styles with the highest prices being entered first. If there are data for two or more styles of the same kind and with the same gross price, the items are entered in the order of styles having the highest net prices.

The difference between the gross selling price and the net price, as shown in Tables 50 and 51, was the discount which was computed at the average rate of the discount taken by customers on the gross sales of the establishment during its last business year, as shown by the "Establishment schedule."

TABLE 52.—NUMBER OF UNITS REPORTED AND NUMBER SOLD AT A PROFIT AND AT A LOSS, BY GROUPS OF STATES.

Description.	Eastern States.			Western States.			Southern States.		
	Total.	Sold at—		Total.	Sold at—		Total.	Sold at—	
		Profit.	Loss.		Profit.	Loss.		Profit.	Loss.
SOLD TO RETAILERS.									
Full fashioned.....	14	14	.....	8	6	2	.....	.....	.....
Seamless, silk or silk and cotton mixed.....	.....	.....	.....	8	8	.....	.....	.....	.....
Seamless, cotton.....	20	18	2	52	42	10	9	9	.....
Seamless, wool or wool and cotton mixed.....	4	2	2	3	3	.....	.....	.....	.....
Seamless, artificial silk.....	.....	.....	.....	4	4	.....	.....	.....	.....
Total.....	38	34	4	75	63	12	9	9	.....
SOLD TO JOBBERS AND COMMISSION HOUSES.									
Full fashioned.....	17	16	1	.....	.....	.....	.....	.....	.....
Seamless, silk or silk and cotton mixed.....	11	7	4	1	1	.....	.....	.....	.....
Seamless, cotton.....	55	34	21	5	3	2	38	24	14
Seamless, wool or wool and cotton mixed.....	26	18	8	.....	.....	.....	.....	.....	.....
Seamless, artificial silk.....	4	3	1	1	1	.....	.....	.....	.....
Total.....	113	78	35	7	4	3	38	24	14

While the unit in each case is one dozen pairs of hose of the same style, this being the unit that is known in the industry, the usual retail price of one pair is given. This retail price was obtained from the manufacturer, who usually knows at what prices his customers will sell the hosiery, and, in fact, he fills orders to produce hosiery that can be sold at certain prices and allow certain profits. These retail prices are the usual prices at which the hosiery is originally retailed, not the prices during reduction sales.

Table 52 shows the number of units of different kinds of hose for which data are given in Tables 50 and 51, also the number of units sold at a profit and the number sold at a loss.

The number and proportion of units sold at a loss to retailers and to jobbers is shown in Table 53.

TABLE 53.—TOTAL NUMBER OF UNITS REPORTED AND PER CENT OF UNITS SOLD AT A PROFIT AND AT A LOSS, ACCORDING TO ESTABLISHMENTS SHOWING A PROFIT OR LOSS ON THE YEAR'S BUSINESS.

Units reported by—	Number of establishments.	Total number of units.	Units sold at a profit.		Units sold at a loss.	
			Number.	Per cent.	Number.	Per cent.
All establishments selling to—						
Retailers.....	23	122	106	86.89	16	3.11
Jobbers and commission houses.....	a 44	158	b 106	67.09	52	32.91
Total.....	a 67	280	b 212	75.71	68	24.29
Establishments showing a profit on year's business selling to—						
Retailers.....	16	87	80	91.95	7	8.05
Jobbers and commission houses.....	a 32	113	b 77	68.14	36	31.86
Total.....	a 48	200	b 157	78.50	43	21.50
Establishments showing a loss on year's business selling to—						
Retailers.....	7	35	26	74.29	9	25.71
Jobbers and commission houses.....	12	45	29	64.44	16	35.56
Total.....	19	80	55	68.75	25	31.25

a Includes 4 establishments which sell to both retailers and jobbers.  
b Includes 1 unit sold at cost.

This table shows that of the 280 units sold to both retailers and jobbers, for which data are shown in the previous tables, 212, or 76 per cent were sold at a profit and 68, or 24 per cent, were sold at a loss. The percentage sold at a loss was much greater in the case of sales to jobbers than in the case of sales to retailers.

Of the 280 units reported, 200 were sold by establishments showing a profit on the year's business. Of these 200 units, 43, or 21.50 per cent were sold at a loss. It is very probable that a considerable proportion of the units which were sold at a loss by establishments earning a profit on their year's business were sold as leaders at a price known to be below cost, in order to induce the purchase of other units in which a profit was realized. Unintelligent price making or reckless competition are the only explanations that can be offered.

Of the 80 units sold by establishments showing a loss on the year's business, 25, or 31.25 per cent, were sold at a loss.

## COST AND PROFIT BY GRADES.

Table 54 compiled from Table 50 shows the cost items and profit on different grades of ladies' full-fashioned hosiery and ladies' seamless cotton hosiery.

TABLE 54.—COMPARATIVE AVERAGE COSTS AND MANUFACTURING PROFITS OF HOSIERY, BASED ON AVERAGE NET PRICE OF 1 DOZEN PAIRS SOLD TO RETAILERS. LADIES' FULL FASHIONED, SILK AND COTTON.

[NOTE.—The figures in the box headings show the range of gross prices per dozen pairs.]

Items.	\$21.50 to \$8.50, 4 styles. <sup>a</sup>	\$4.25 to \$3.85, 3 styles. <sup>b</sup>	\$2.25 to \$1.95, 5 styles. <sup>c</sup>	\$21.50 to \$8.50, 4 styles. <sup>a</sup>	\$4.25 to \$4, 3 styles. <sup>b</sup>	\$2.25 to \$1.95, 5 styles. <sup>c</sup>
Average net selling price.....	\$11.64	\$3.89	\$2.02	Per cent. 100.00	Per cent. 100.00	Per cent. 100.00
Net cost of all materials.....	5.09	1.29	.66	43.73	33.16	32.82
Direct labor.....	2.65	1.21	.79	22.80	31.10	39.06
Indirect labor and factory expense.....	.95	.51	.40	8.13	13.11	19.55
Administrative and selling expense.....	1.13	.42	.23	10.13	10.80	11.29
Total cost.....	9.87	3.43	2.08	84.79	88.17	102.72
Manufacturing profit.....	1.77	.46	.06	15.21	11.83	2.72

## LADIES' SEAMLESS, COTTON.

Items.	\$4.25 to \$4, 4 styles.	\$2.40 to \$2, 10 styles.	\$1.20 to \$0.425, 10 styles.	\$4.25 to \$4, 4 styles.	\$2.40 to \$2, 10 styles.	\$1.20 to \$0.425, 10 styles.
Average net selling price.....	\$4.02	\$2.10	\$1.00	Per cent. 100.00	Per cent. 100.00	Per cent. 100.00
Net cost of all materials.....	1.10	.89	.43	27.36	42.60	43.50
Direct labor.....	.50	.37	.28	12.33	17.75	27.90
Indirect labor and factory expense.....	.38	.23	.14	9.59	10.76	13.90
Administrative and selling expense.....	1.03	.30	.10	25.54	14.28	10.00
Total cost.....	3.01	1.79	.95	74.83	85.39	95.30
Manufacturing profit.....	1.01	.31	.05	25.17	14.61	4.70

<sup>a</sup> One style of silk and 3 of silk and cotton.

<sup>b</sup> Mercerized cotton.

<sup>c</sup> Cotton.

<sup>d</sup> Loss.

In the arrangement of the foregoing table the data regarding different styles of hosiery are shown in the following order: High-priced grades, medium-priced grades, and low-priced grades.

Reproduced from Table 50 this condensed table shows data for 4 styles of ladies' full-fashioned hosiery having gross prices of \$8.50 per dozen pairs or over, 3 styles sold at from \$3.85 to \$4.25 gross, and 5 styles having gross prices of \$2.25 and lower; 4 styles of ladies' seamless cotton hosiery having gross prices of from \$4 to \$4.25, 10 styles having gross prices of from \$2 to \$2.40, and 10 styles having gross prices of \$1.20 and lower.

For each of the grades the condensed table shows the average net selling price, manufacturing profit, and the items which enter into the cost of manufacturing; it also shows the percentage that the various items of cost and profit are of the average net selling price.

The percentages of profit on the grades of full-fashioned hosiery shown in this condensed table were not so large as the percentages of profit on the grades of seamless hosiery, although the establishment tables show that the mills which made full-fashioned hosiery earned a greater average percentage of profit than the mills which made seamless cotton hosiery.

On the high-priced full-fashioned hosiery the percentage of profit was 15.21; on the medium priced, 11.83. On the low-priced full-fashioned hosiery there was a loss of 2.72 per cent. The competition with foreign-made hosiery is almost entirely on low-priced full-

fashioned hosiery, including full-fashioned hosiery for children and infants, which is little manufactured in the United States. This low-priced product is made of cotton and the duty on it varies from 30 to 50 per cent ad valorem, according to value.

Medium and high priced full-fashioned hosiery is made of silk or mostly of silk, and the duty of 50 per cent on such product is sufficient to exclude foreign competition.

The condensed table shows that the average percentage of profit on the seamless cotton hosiery was 25.17 on the high-priced grades, 14.61 on the medium-priced grades, and 4.7 on the low-priced grades.

For both the full-fashioned and seamless cotton styles the percentages of direct labor, indirect labor and factory expense were largest on the low-priced grades, lower on the medium-priced grades, and lowest on the high-priced grades, the difference in these percentages being considerable.

Table 55 is similar to the last one except that the item of net selling price and of profit are omitted and the percentage of the items of cost of production is based on the total manufacturing and selling expense.

TABLE 55.—COMPARATIVE AVERAGE COSTS OF HOSIERY, BASED ON AVERAGE TOTAL COST OF 1 DOZEN PAIRS SOLD TO RETAILERS.

## LADIES' FULL-FASHIONED, SILK AND COTTON.

[NOTE.—The figures in the box headings show the range of gross prices per dozen pairs.]

Items.	\$21.50 to \$8.50, 4 styles. <sup>a</sup>	\$4.25 to \$3.85, 3 styles. <sup>b</sup>	\$2.25 to \$1.95, 5 styles. <sup>c</sup>	\$21.50 to \$8.50, 4 styles. <sup>a</sup>	\$4.25 to \$4, 3 styles. <sup>b</sup>	\$2.25 to \$1.95, 5 styles. <sup>c</sup>
Average total cost.....	\$9.87	\$3.43	\$2.08	Per cent. 100.00	Per cent. 100.00	Per cent. 100.00
Net cost of all materials.....	5.09	1.29	.66	51.58	37.61	31.95
Direct labor.....	2.65	1.21	.79	26.89	35.28	38.02
Indirect labor and factory expense.....	.95	.51	.40	9.58	14.87	19.04
Administrative and selling expense.....	1.18	.42	.23	11.95	12.24	10.99

## LADIES' SEAMLESS, COTTON.

Items.	\$4.25 to \$4, 4 styles.	\$2.40 to \$2, 10 styles.	\$1.20 to \$0.425, 10 styles.	\$4.25 to \$4, 4 styles.	\$2.40 to \$2, 10 styles.	\$1.20 to \$0.425, 10 styles.
Average total cost.....	\$3.01	\$1.79	\$0.95	Per cent. 100.00	Per cent. 100.00	Per cent. 100.00
Net cost of all materials.....	1.10	.89	.43	36.57	49.89	45.64
Direct labor.....	.50	.37	.28	16.47	20.79	29.28
Indirect labor and factory expense.....	.38	.23	.14	12.82	12.60	14.59
Administrative and selling expense.....	1.03	.30	.10	34.14	16.72	10.49

<sup>a</sup> One style of silk and 3 of cotton and silk.

<sup>b</sup> Mercerized cotton.

<sup>c</sup> Cotton.

This table, like the preceding condensed table, shows that the percentages for direct labor, indirect labor, and factory expense decrease from the low-priced to the high-priced products.

## COST OF MATERIALS IN UNITS.

Table 56 is intended to show in detail the cost of the different materials used in 1 dozen pairs of hose for which the items of cost and the profit are shown in Tables 50 and 51. In this table the establishments that reported the costs of units are given in numerical sequence and the styles of each establishment in alphabetical order. The figures in the last column, showing the net cost of all materials, agree with the figures for the same styles in Tables 50 and 51.

TABLE 56.—DETAILS OF COST OF MATERIALS, PER DOZEN PAIRS OF HOSE, BY ESTABLISHMENTS AND STYLES.  
 (Note.—The styles are designated by letters for convenience of reference to Tables 50, 51, and 57. The same letter applied to the products of different establishments does not indicate identity or even similarity of styles.)

Estab- lish- ments.	Style.	Seamless or full fashioned.	Made for—	Gross price of 1 dozen pairs to retailer.	Yarn used in 1 dozen pairs.		Cost of materials in 1 dozen pairs.					
					Kind.	Ounces.	Price per pound.	Yarn.	Sundries.	Total.	Discount.	Net material cost.
1.....	A	Full fashioned.	Women.....	\$1.950	S. C. P. 1/24.....	23.50	\$0.300	\$0.495	\$0.030	\$0.525	\$0.010	\$0.515
1.....	B	do.....	do.....	2.900	S. C. P. 2/30 mer. gas.	1.50	.560	.987	.065	1.052	.020	1.032
1.....	C	do.....	do.....	3.500	S. C. P. 1/50 mer. gas.	18.75	.710	1.357	.060	1.417	.027	1.390
1.....	D	do.....	do.....	4.000	S. C. S. 1/2100.....	1.50	1.250	.940	.857	.917	.017	.900
2.....	A	do.....	do.....	a 6.500	S. C. P. 2/70 mer. gas.	21.00	.940	2.000	.857	.917	.017	.900
2.....	B	do.....	do.....	a 7.250	S. C. P. 2/78 mer. gas.	13.00	.420	2.000	.857	.917	.017	.900
3.....	A	do.....	do.....	1.950	S. C. P. 1/60.....	10.25	.620	2.002	.125	2.127	.064	2.063
3.....	B	do.....	do.....	a 2.900	Jap. tram, 10 thread.	8.50	.4150	2.780	.125	2.905	.069	2.836
3.....	C	do.....	do.....	1.900	E. C. P. 2/50 cones.	11.50	.620	2.780	.125	2.905	.069	2.836
3.....	D	do.....	Men.....	a 2.900	S. K. P. 13 1/2.....	9.00	.4150	.698	.050	.748	.034	.714
3.....	E	do.....	Women.....	a 2.550	S. K. P. 1/36.....	28.50	.340	.714	.070	.784	.024	.760
3.....	F	do.....	do.....	a 2.650	Eg. 14s/78.....	20.00	.820	.820	.024	.844	.024	.820
4.....	A	do.....	Men.....	4.000	E. C. P. 1/28.....	30.00	.340	.638	.080	.718	.033	.685
4.....	B	do.....	do.....	3.850	S. C. P. 2/60 mer. gas.	7.50	.750	.750	.080	.830	.035	.805
4.....	C	do.....	Women.....	8.500	C. P. 2/78 mer. gas.	4.00	4.000	1.350	.060	1.410	.065	1.345
4.....	D	do.....	do.....	8.500	7-strand silk 2 2/4.....	21.00	.940	1.370	.065	1.435	.066	1.369
5.....	A	do.....	Men.....	a 2.500	S. C. P. 260 goss.....	4.00	1.000	3.560	.155	3.715	.169	3.546
5.....	B	do.....	do.....	a 3.800	C. P. 2/120 mer. gas.	4.00	1.260	3.560	.155	3.715	.169	3.546
5.....	C	do.....	Women.....	a 1.825	1/2 blood 1/40.....	9.00	.880	.759	.105	.864	.011	.853
5.....	D	do.....	do.....	a 1.850	50/50 merino 2/34.....	9.00	.340	.759	.105	.864	.011	.853
6.....	A	do.....	Infants.....	a 6.650	E. K. P. 1/30 skeins.	17.00	.350	1.401	.130	1.531	.019	1.512
6.....	B	do.....	Children.....	a 6.650	50/50 merino 2/84.....	2.00	.680	.765	.075	.840	.011	.829
6.....	C	do.....	Women.....	a 6.650	Fine Aus. 1/45.....	10.50	1.090	1.090	.075	.840	.011	.829
6.....	D	do.....	do.....	a 6.650	Japan silk 2/30.....	7.00	.850	.850	.068	.918	.009	.909
6.....	E	do.....	do.....	a 6.650	E. K. P. 1/16 skeins.....	7.00	.850	.850	.068	.918	.009	.909
6.....	F	do.....	do.....	a 6.650	E. K. P. 1/24 skeins.....	(b)	(b)	(b)	(b)	(b)	(b)	(b)
6.....	G	do.....	do.....	a 6.650	6-thread silk 5-dram 14 1/4 denier.	4.72	7.720	2.971	.120	3.091	.059	3.032
6.....	H	do.....	do.....	a 6.650	Eg. cotton 2/50.....	15.00	.740	2.971	.120	3.091	.059	3.032

|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|

a Gross price of one dozen pairs sold to jobbers or commission houses. b Included with other yarn used. c Included with yarn.

TABLE 56.—DETAILS OF COST OF MATERIALS, PER DOZEN PAIRS OF HOSE, BY ESTABLISHMENTS AND STYLES—Continued.

Estab-lish-ments.	Style.	Seamless or full fashioned.	Made for—	Gross price of 1 dozen pairs to retailers.	Yarn used in 1 dozen pairs.		Price per pound.	Cost of materials in 1 dozen pairs.				
					Kind.	Ounces.		Yarn.	Sundries.	Total.	Discount.	Net material cost.
13.....	A	Seamless.....	Men.....	\$0.425	S. K. P. 1/20.....	11.00	\$0.225	\$0.154	\$0.010	\$0.164	\$0.003	\$0.161
13.....	B	do.....	Women.....	a. 425	S. K. P. 1/20.....	24.00	.380	.338	.025	.363	.007	.356
13.....	C	do.....	do.....	a. 425	S. K. P. 1/20.....	28.00	.225	.394	.025	.419	.008	.411
14.....	A	do.....	do.....	a. 425	K. P. 1/18.....	8.00	.230	.115	.060	.175	.003	.172
14.....	B	do.....	do.....	a. 425	C. P. 1/22.....	32.00	.240	.480	.060	.540	.010	.530
14.....	C	do.....	do.....	a. 425	C. P. 1/20.....	24.00	.300	.450	.060	.510	.010	.500
14.....	D	do.....	do.....	a. 425	C. P. 2/80.....	15.00	.980	.919	.060	.979	.019	.960
14.....	E	do.....	do.....	a. 425	C. P. 1/16.....	20.00	.290	.363	.060	.423	.008	.415
14.....	F	do.....	Women.....	a. 425	K. P. 1/17.....	28.00	.240	.420	.060	.480	.009	.471
15.....	A	do.....	do.....	a. 425	E. C. P. 1/30.....	14.00	.360	.400	.038	.444	.014	.430
15.....	B	do.....	do.....	a. 425	E. C. P. 2/70.....	1.00	.750	.406	.038	.444	.014	.430
15.....	C	do.....	do.....	a. 425	E. C. P. 1/60 mer.....	1.00	.850	.695	.038	.733	.023	.710
17.....	A	do.....	do.....	a. 425	E. C. P. 1/70.....	1.00	.750	.862	.038	.900	.028	.872
17.....	B	do.....	do.....	a. 425	S. K. P. 1/20.....	20.00	.245	.306	.030	.336	.008	.328
17.....	C	do.....	do.....	a. 425	S. K. P. 1/20.....	24.00	.265	.398	.031	.429	.010	.419
18.....	A	do.....	Men.....	a. 425	S. K. P. 1/20.....	19.00	.265	.265	.030	.295	.007	.288
18.....	B	do.....	Women.....	a. 425	S. K. P. 2/26.....	4.00	.250	.380	.025	.405	.006	.399
18.....	C	do.....	do.....	a. 425	S. K. P. 1/40.....	1.00	.320	.458	.025	.483	.008	.475
18.....	D	do.....	do.....	a. 425	S. K. P. 1/18 mule spun.....	28.00	.250	.551	.025	.576	.009	.567
18.....	E	do.....	Men.....	a. 425	S. C. P. 1/16 mule spun.....	34.00	.250	.329	.025	.354	.005	.349
18.....	F	do.....	Boys.....	a. 425	S. K. P. 1/40.....	1.00	.320	.282	.025	.307	.005	.302
19.....	A	do.....	do.....	a. 425	S. K. P. 2/14.....	36.00	.220	.515	.025	.540	.009	.531

19.....	A	do.....	Women.....	a. 950	E. C. P. 1/20.....	13.50	.375	.402	.022	.424	.008
19.....	B	do.....	do.....	a. 950	E. C. P. 1/80.....	1.00	.800	.769	.040	.809	.016
21.....	A	do.....	do.....	a. 800	E. C. P. 1/30.....	1.50	.380	.323	(b)	.323	.003
21.....	B	do.....	do.....	a. 1.000	E. C. P. 1/20.....	15.75	.295	.423	(b)	.423	.003
21.....	C	do.....	do.....	a. 1.750	E. C. P. 1/50.....	1.25	.420	.894	(b)	.894	.007
22.....	A	do.....	do.....	a. 1.750	E. K. P. 2/40 mer. gas.	26.00	.520	.914	.044	.958	.033
22.....	B	do.....	do.....	a. 1.850	E. C. P. 2/60 mer.	1.20	.680	1.093	.043	1.136	.039
22.....	C	do.....	do.....	a. 1.700	E. K. P. 1/11	1.26	.683	.694	.043	.737	.026
23.....	A	do.....	do.....	a. 950	S. K. P. 1/18	28.00	.390	.420	.030	.450	.009
23.....	B	do.....	do.....	a. 1.650	E. C. P. 2/50 mer.	22.00	.600	.825	.030	.855	.018
23.....	D	do.....	do.....	a. 800	S. C. P. 1/20.....	9.00	.320	.180	.020	.190	.004
23.....	E	do.....	do.....	a. 800	E. C. P. 2/30	7.10	.440	.330	.020	.350	.007
24.....	A	do.....	do.....	a. 1.050	E. K. P. 1/10	32.00	.280	.460	.042	.502	.011
24.....	B	do.....	do.....	a. 1.025	E. K. P. 1/10	22.00	.270	.405	.042	.447	.010
24.....	D	do.....	do.....	a. 1.025	E. K. P. 1/10	22.00	.270	.371	.042	.413	.009
24.....	E	do.....	do.....	a. 975	E. C. P. 1/10	17.00	.280	.298	.041	.339	.007
26.....	B	do.....	do.....	a. 1.150	S. C. P. 1/36	17.00	.300	.426	.040	.466	.039
27.....	A	do.....	do.....	a. 575	S. C. P. 1/60	23.00	.330	.518	.040	.558	.012
27.....	B	do.....	do.....	a. 485	S. K. P. 1/14	16.00	.300	.320	.033	.353	.007
27.....	C	do.....	do.....	a. 600	S. K. P. 1/16	5.00	.220	.254	.025	.279	.006
27.....	D	do.....	do.....	a. 600	S. K. P. 1/40	31.00	.320	.380	.038	.418	.008
28.....	A	do.....	do.....	a. 775	S. K. P. 1/10	24.00	.210	.356	.025	.381	.002
28.....	B	do.....	do.....	a. 1.050	S. K. P. 2/14	38.00	.220	.543	.027	.570	.003
28.....	C	do.....	do.....	a. 825	S. K. P. 1/40	24.00	.235	.373	.023	.396	.002
28.....	D	do.....	do.....	a. 975	S. K. P. 1/13	32.00	.215	.456	.025	.481	.003
28.....	E	do.....	do.....	a. 700	S. K. P. 1/19	24.00	.230	.315	.025	.340	.030
28.....	A	do.....	do.....	a. 700	S. K. P. 1/19	24.00	.230	.315	.025	.340	.030



TABLE 56.—DETAILS OF COST OF MATERIALS, PER DOZEN PAIRS OF HOSE, BY ESTABLISHMENTS AND STYLES—Continued.

Estab-lish-ments.	Style.	Seamless or full fashioned.	Made for—	Gross price of 1 dozen pairs to retailers.	Yarn used in 1 dozen pairs.		Price per pound.	Cost of materials in 1 dozen pairs.				
					Kind.	Ounces.		Yarn.	Sundries.	Total.	Discount.	Net material cost.
29	B	Seamless	Men	a. 80.725	S. K. P. 1/14	20.00	\$0.240	\$0.300	\$0.025	\$0.325	(b)	\$0.325
29	C	do	do	a. 800	S. K. P. 1/16	18.00	.330	.371	.080	.451	(b)	.401
30	A	do	Women	a. 700	S. K. P. 1/16	24.00	.200	.325	.023	.348		.343
30	B	do	Men	a. 650	S. K. P. 1/12	18.00	.400	.245	.023	.268		.264
30	C	do	Misses	a. 675	Splicer	(c)	.3133	.255	.025	.280	.004	.276
33	A	do	Men	a. 975	Splicer	20.00	.200	.308	.012	.320	.011	.309
33	B	do	do	a. 950	S. K. P. 1/16	6.50	.430	.292	.025	.317	.011	.306
33	C	do	Infants	a. 750	S. K. P. 1/16	4.25	.285	.167	.005	.172	.006	.166
33	D	do	do	a. 925	E. C. P. 2/50 mer.	8.00	.570	.276	.019	.295	.010	.285
33	E	do	Women	a. 1.000	S. K. P. 1/16	5.00	.680	.453	.030	.483	.016	.467
33	F	do	do	a. 1.700	E. C. P. 2/20 mer.	1.00	.480	.694	.040	.734	.024	.710
34	A	do	Men	a. 550	E. C. P. 1/50	16.50	.580	.351	(d)	.351	(b)	.351
34	B	do	do	a. 600	S. K. P. 1/14	1.00	.700	.401	(d)	.401	(b)	.401
34	C	do	Women	a. 650	S. K. P. 2/18	31.04	.1808	.453	(d)	.453	(b)	.453
34	D	do	do	a. 600	S. K. P. 2/17	40.00	.1808	.462	(d)	.462	(b)	.462
34	E	do	Men	a. 650	S. K. P. 2/10	35.32	.1848	.462	(d)	.462	(b)	.462
35	A	do	Men	.750	S. K. P. 1/10	14.00	.1848	3.31	.037	.368	.007	.361
35	B	do	do	1.000	S. K. P. 2/20	7.00	.250	.373	.037	.410	.008	.402
35	C	do	do	1.100	S. K. P. 1/40	1.00	.285	.367	.037	.404	.008	.396

Estab-lish-ments.	Style.	Seamless or full fashioned.	Made for—	Gross price of one dozen pairs to retailers.	Yarn used in 1 dozen pairs.	Price per pound.	Ounces.	Yarn.	Sundries.	Total.	Net material cost.
35	D	do	do	2.000	S. K. P. 1/16	4.00	4.00	.746	.100	.846	.829
36	A	do	do	a. 650	S. K. P. 1/16	1.00	1.840	.215	.043	.258	.253
36	B	do	do	a. 900	S. K. P. 1/16	12.75	8.50	.274	.051	.325	.319
37	A	do	Women	a. 700	E. C. P. 1/16	7.00	3.80	.325	.023	.348	.343
37	B	do	Men	a. 650	S. K. P. 1/16	24.00	2.00	.245	.023	.268	.264
37	C	do	Misses	a. 675	S. K. P. 1/16	18.00	2.133	.255	.025	.280	.276
38	A	do	Children	a. 910	S. K. P. 1/12	20.00	(c)	.308	.012	.320	.309
38	B	do	Boys	a. 970	E. C. P. 1/16	16.00	3.00	.413	.060	.473	.458
38	C	do	Misses	a. 1.430	E. C. P. 1/16	5.50	3.20	.640	.050	.690	.683
39	A	do	Men	a. 650	S. K. P. 1/16	1.50	3.75	.549	.050	.599	.593
39	B	do	do	a. 1.000	E. C. P. 1/16	22.00	2.20	.303	.023	.326	.318
39	C	do	do	a. 875	S. K. P. 1/16	21.00	2.100	.533	.023	.556	.543
40	A	do	Women	a. 675	S. K. P. 1/16	22.00	2.200	.407	.023	.430	.420
40	B	do	Men	a. 675	S. K. P. 1/16	18.00	2.100	.263	.018	.281	.279
40	C	do	Children	a. 675	S. K. P. 1/16	21.00	2.100	.364	.018	.382	.379
41	A	do	Men	1.050	S. K. P. 1/16	4.50	3.05	.300	.018	.318	.315
41	B	do	do	2.000	S. K. P. 1/16	10.00	3.25	.330	.028	.358	.348
41	C	do	Women	2.150	S. K. P. 1/16	16.00	3.25	.591	.078	.669	.651
41	D	do	do	1.200	S. K. P. 1/16	23.00	3.45	.865	.083	.948	.932
41	E	do	Children	1.250	S. K. P. 1/16	27.00	3.45	.484	.088	.572	.568
42	A	do	Infants	a. 625	S. K. P. 1/16	7.00	3.65	.479	.046	.525	.515
42	B	do	do	a. 950	S. K. P. 1/16	6.00	3.60	.134	.040	.174	.161

d Included with yarn.

e Included with other yarn used.

f No discount, material is net.

g Gross price of one dozen pairs sold to jobbers or commission houses.

TABLE 56.—DETAILS OF COST OF MATERIALS, PER DOZEN PAIRS OF HOSE, BY ESTABLISHMENTS AND STYLES—Continued.

Estab-lish-ments.	Style.	Seamless or full fashioned.	Made for—	Gross price of 1 dozen pairs to retailers.	Yarn used in 1 dozen pairs.		Cost of materials in 1 dozen pairs.					
					Kind.	Ounces.	Price per pound.	Yarn.	Sundries.	Total.	Discount.	Net material cost.
43	A	Seamless	Women	a \$0.975	E. C. P. 1/40	13.00	\$0.418	\$0.340	\$0.025	\$0.365	\$0.007	\$0.358
43	B	do.	do.	a 1.750	E. C. P. 2/80 mer.	13.00	.948	.770	.025	.795	.016	.779
43	C	do.	do.	a 3.500	Jap. tram silk, 7-thread Kansai, No. 1 extra	5.00	4.064	1.650	.040	1.690	.034	1.656
44	A	do.	Men	1.050	E. C. 2/80 mer. gas.	8.00	.760	.328	.070	.398	.008	.390
44	B	do.	do.	.950	E. K. P. 1/14	14.25	.250	.328	.070	.398	.008	.390
44	C	do.	do.	1.100	E. K. P. 1/40	1.00	.258	.328	.070	.398	.008	.390
44	D	do.	do.	1.000	E. K. P. 1/18	4.50	.253	.268	.065	.333	.006	.327
44	E	do.	do.	1.125	E. K. P. 1/17	10.75	.248	.345	.070	.415	.008	.407
44	F	do.	do.	1.150	E. K. P. 2/60	4.00	.248	.345	.070	.415	.008	.407
44	G	do.	do.	1.000	E. K. P. 1/40	1.00	.320	.374	.075	.449	.009	.440
44	H	do.	do.	1.125	E. K. P. 1/70	8.75	.330	.374	.075	.449	.009	.440
44	I	do.	do.	1.150	E. K. P. 1/46	3.20	.320	.374	.075	.449	.009	.440
44	J	do.	do.	1.150	E. K. P. 1/70	1.00	.640	.367	.073	.440	.009	.431
44	K	do.	do.	1.150	E. K. P. 1/19	26.50	.230	.367	.073	.440	.009	.431
44	L	do.	do.	1.150	E. K. P. 1/19	26.50	.230	.367	.073	.440	.009	.431
44	M	do.	do.	1.150	Jap. tram silk	2.50	4.160	.958	.050	1.008	.020	.988
44	N	do.	do.	1.150	E. K. P. 1/30	13.00	.310	.958	.050	1.008	.020	.988
44	O	do.	do.	1.150	E. C. P. 1/80	1.00	.900	1.056	.050	1.106	.022	1.084
44	P	do.	do.	1.150	E. C. 2/80 mer. gas.	16.00	1.000	1.056	.050	1.106	.022	1.084
44	Q	do.	do.	1.150	E. C. P. 1/80	1.00	.900	1.056	.050	1.106	.022	1.084
44	R	do.	do.	1.150	E. C. P. 1/18	16.00	.310	.958	.050	1.008	.020	.988
44	S	do.	do.	1.150	E. K. P. 1/18	16.00	.310	.958	.050	1.008	.020	.988
44	T	do.	do.	1.150	E. C. P. 1/20	4.00	.320	.443	.055	.498	.014	.484
44	U	do.	do.	1.150	Jap. best No. 1, 4-thread	2.50	3.840	.775	.030	.805	.022	.783
44	V	do.	do.	1.150	E. C. P. 1/24	4.00	.320	.443	.055	.498	.014	.484
44	W	do.	do.	1.150	E. C. P. 1/40	0.50	.480	.443	.055	.498	.014	.484
44	X	do.	do.	1.150	E. C. P. 2/44 mer.	4.00	.520	.443	.055	.498	.014	.484
44	Y	do.	do.	1.150	E. C. P. 2/60 mer.	8.00	.560	.443	.055	.498	.014	.484
44	Z	do.	do.	1.150	E. C. P. 1/60	0.50	.480	.443	.055	.498	.014	.484

46	C	do.	do.	a 3.400	E. C. P. 2/80 mer.									
					Art. silk 1/30	2.25	2.000	2.021	.055	2.076	.057	2.019		
7	A	do.	do.	a 1.850	Jap. best No. 1, 10-thread									
					E. C. P. 2/50 mer.	5.75 <td>3.840<td>.876<td>.060<td>.936<td>.019<td>.917</td></td></td></td></td></td>	3.840 <td>.876<td>.060<td>.936<td>.019<td>.917</td></td></td></td></td>	.876 <td>.060<td>.936<td>.019<td>.917</td></td></td></td>	.060 <td>.936<td>.019<td>.917</td></td></td>	.936 <td>.019<td>.917</td></td>	.019 <td>.917</td>	.917		
					E. C. P. 1/40	1.25 <td>.640<td>.230<td>.030<td>.260<td>.005<td>.255</td></td></td></td></td></td>	.640 <td>.230<td>.030<td>.260<td>.005<td>.255</td></td></td></td></td>	.230 <td>.030<td>.260<td>.005<td>.255</td></td></td></td>	.030 <td>.260<td>.005<td>.255</td></td></td>	.260 <td>.005<td>.255</td></td>	.005 <td>.255</td>	.255		
7	B	do.	do.	a .950	E. C. P. 1/60									
					Art. silk	3.75 <td>.700<td>.287<td>.030<td>.317<td>.006<td>.311</td></td></td></td></td></td>	.700 <td>.287<td>.030<td>.317<td>.006<td>.311</td></td></td></td></td>	.287 <td>.030<td>.317<td>.006<td>.311</td></td></td></td>	.030 <td>.317<td>.006<td>.311</td></td></td>	.317 <td>.006<td>.311</td></td>	.006 <td>.311</td>	.311		
					E. C. P. 1/40 mer.	2.62 <td>.530<td>.230<td>.030<td>.260<td>.005<td>.255</td></td></td></td></td></td>	.530 <td>.230<td>.030<td>.260<td>.005<td>.255</td></td></td></td></td>	.230 <td>.030<td>.260<td>.005<td>.255</td></td></td></td>	.030 <td>.260<td>.005<td>.255</td></td></td>	.260 <td>.005<td>.255</td></td>	.005 <td>.255</td>	.255		
7	C	do.	do.	a 1.000	E. C. P. 2/40 mer.									
					E. C. P. 1/10	4.25 <td>.208<td>.230<td>.030<td>.260<td>.005<td>.255</td></td></td></td></td></td>	.208 <td>.230<td>.030<td>.260<td>.005<td>.255</td></td></td></td></td>	.230 <td>.030<td>.260<td>.005<td>.255</td></td></td></td>	.030 <td>.260<td>.005<td>.255</td></td></td>	.260 <td>.005<td>.255</td></td>	.005 <td>.255</td>	.255		
					E. C. P. 1/40	1.00 <td>.240<td>.287<td>.030<td>.317<td>.006<td>.311</td></td></td></td></td></td>	.240 <td>.287<td>.030<td>.317<td>.006<td>.311</td></td></td></td></td>	.287 <td>.030<td>.317<td>.006<td>.311</td></td></td></td>	.030 <td>.317<td>.006<td>.311</td></td></td>	.317 <td>.006<td>.311</td></td>	.006 <td>.311</td>	.311		
8	A	do.	Women	a 1.000	E. C. P. 1/14									
					E. C. P. 1/20	9.75 <td>2.850<td>.287<td>.030<td>.317<td>.006<td>.311</td></td></td></td></td></td>	2.850 <td>.287<td>.030<td>.317<td>.006<td>.311</td></td></td></td></td>	.287 <td>.030<td>.317<td>.006<td>.311</td></td></td></td>	.030 <td>.317<td>.006<td>.311</td></td></td>	.317 <td>.006<td>.311</td></td>	.006 <td>.311</td>	.311		
					E. C. P. 1/40	16.00 <td>.258<td>.355<td>.030<td>.385<td>.011<td>.374</td></td></td></td></td></td>	.258 <td>.355<td>.030<td>.385<td>.011<td>.374</td></td></td></td></td>	.355 <td>.030<td>.385<td>.011<td>.374</td></td></td></td>	.030 <td>.385<td>.011<td>.374</td></td></td>	.385 <td>.011<td>.374</td></td>	.011 <td>.374</td>	.374		
8	B	do.	Men	a 1.000	E. C. P. 1/16									
					E. C. P. 1/16	6.00 <td>.258<td>.355<td>.030<td>.385<td>.011<td>.374</td></td></td></td></td></td>	.258 <td>.355<td>.030<td>.385<td>.011<td>.374</td></td></td></td></td>	.355 <td>.030<td>.385<td>.011<td>.374</td></td></td></td>	.030 <td>.385<td>.011<td>.374</td></td></td>	.385 <td>.011<td>.374</td></td>	.011 <td>.374</td>	.374		
					E. C. P. 1/12 mer.	12.00 <td>.258<td>.257<td>.030<td>.287<td>.008<td>.279</td></td></td></td></td></td>	.258 <td>.257<td>.030<td>.287<td>.008<td>.279</td></td></td></td></td>	.257 <td>.030<td>.287<td>.008<td>.279</td></td></td></td>	.030 <td>.287<td>.008<td>.279</td></td></td>	.287 <td>.008<td>.279</td></td>	.008 <td>.279</td>	.279		
8	C	do.	Women	a 1.500	E. C. P. 2/50									
					E. C. P. 2/36	13.00 <td>.490<td>.666<td>.060<td>.726<td>.020<td>.706</td></td></td></td></td></td>	.490 <td>.666<td>.060<td>.726<td>.020<td>.706</td></td></td></td></td>	.666 <td>.060<td>.726<td>.020<td>.706</td></td></td></td>	.060 <td>.726<td>.020<td>.706</td></td></td>	.726 <td>.020<td>.706</td></td>	.020 <td>.706</td>	.706		
					E. C. P. 2/50	13.00 <td>.490<td>.666<td>.060<td>.726<td>.020<td>.706</td></td></td></td></td></td>	.490 <td>.666<td>.060<td>.726<td>.020<td>.706</td></td></td></td></td>	.666 <td>.060<td>.726<td>.020<td>.706</td></td></td></td>	.060 <td>.726<td>.020<td>.706</td></td></td>	.726 <td>.020<td>.706</td></td>	.020 <td>.706</td>	.706		
8	D	do.	Men	a 1.500	E. C. P. 2/36									
					E. C. P. 2/36	5.00 <td>.450<td>.356<td>.060<td>.416<td>.012<td>.404</td></td></td></td></td></td>	.450 <td>.356<td>.060<td>.416<td>.012<td>.404</td></td></td></td></td>	.356 <td>.060<td>.416<td>.012<td>.404</td></td></td></td>	.060 <td>.416<td>.012<td>.404</td></td></td>	.416 <td>.012<td>.404</td></td>	.012 <td>.404</td>	.404		
					E. C. P. 2/36	1.50 <td>.330<td>.356<td>.060<td>.416<td>.012<td>.404</td></td></td></td></td></td>	.330 <td>.356<td>.060<td>.416<td>.012<td>.404</td></td></td></td></td>	.356 <td>.060<td>.416<td>.012<td>.404</td></td></td></td>	.060 <td>.416<td>.012<td>.404</td></td></td>	.416 <td>.012<td>.404</td></td>	.012 <td>.404</td>	.404		
8	E	do.	Women	a 3.350	Jap. silk									
					E. C. P. 2/60 mer.	4.50 <td>4.200<td>1.621<td>.060<td>1.681<td>.047<td>1.634</td></td></td></td></td></td>	4.200 <td>1.621<td>.060<td>1.681<td>.047<td>1.634</td></td></td></td></td>	1.621 <td>.060<td>1.681<td>.047<td>1.634</td></td></td></td>	.060 <td>1.681<td>.047<td>1.634</td></td></td>	1.681 <td>.047<td>1.634</td></td>	.047 <td>1.634</td>	1.634		
					E. C. P. 2/60 mer.	10.50 <td>.671<td>1.621<td>.060<td>1.681<td>.047<td>1.634</td></td></td></td></td></td>	.671 <td>1.621<td>.060<td>1.681<td>.047<td>1.634</td></td></td></td></td>	1.621 <td>.060<td>1.681<td>.047<td>1.634</td></td></td></td>	.060 <td>1.681<td>.047<td>1.634</td></td></td>	1.681 <td>.047<td>1.634</td></td>	.047 <td>1.634</td>	1.634		
8	F	do.	Men	a 3.000	Jap. silk									
					E. C. P. 2/40 mer.	3.25 <td>4.200<td>1.133<td>.060<td>1.193<td>.034<td>1.159</td></td></td></td></td></td>	4.200 <td>1.133<td>.060<td>1.193<td>.034<td>1.159</td></td></td></td></td>	1.133 <td>.060<td>1.193<td>.034<td>1.159</td></td></td></td>	.060 <td>1.193<td>.034<td>1.159</td></td></td>	1.193 <td>.034<td>1.159</td></td>	.034 <td>1.159</td>	1.159		
					E. C. P. 2/40 mer. gas.	16.00 <td>.870<td>1.133<td>.060<td>1.193<td>.034<td>1.159</td></td></td></td></td></td>	.870 <td>1.133<td>.060<td>1.193<td>.034<td>1.159</td></td></td></td></td>	1.133 <td>.060<td>1.193<td>.034<td>1.159</td></td></td></td>	.060 <td>1.193<td>.034<td>1.159</td></td></td>	1.193 <td>.034<td>1.159</td></td>	.034 <td>1.159</td>	1.159		
9	A	do.	do.	a 1.750	E. C. P. 1/60									
					E. C. P. 1/60	1.00 <td>1.000<td>.933<td>.060<td>.993<td>.025<td>.968</td></td></td></td></td></td>	1.000 <td>.933<td>.060<td>.993<td>.025<td>.968</td></td></td></td></td>	.933 <td>.060<td>.993<td>.025<td>.968</td></td></td></td>	.060 <td>.993<td>.025<td>.968</td></td></td>	.993 <td>.025<td>.968</td></td>	.025 <td>.968</td>	.968		
					E. C. P. 1/60	1.00 <td>1.000<td>.933<td>.060<td>.993<td>.025<td>.968</td></td></td></td></td></td>	1.000 <td>.933<td>.060<td>.993<td>.025<td>.968</td></td></td></td></td>	.933 <td>.060<td>.993<td>.025<td>.968</td></td></td></td>	.060 <td>.993<td>.025<td>.968</td></td></td>	.993 <td>.025<td>.968</td></td>	.025 <td>.968</td>	.968		
9	B	do.	do.	a 3.250	Kansai 10 thread									
					E. C. P. 2/60 mer. gas.	6.50 <td>4.550<td>2.305<td>.060<td>2.365<td>.060<td>2.305</td></td></td></td></td></td>	4.550 <td>2.305<td>.060<td>2.365<td>.060<td>2.305</td></td></td></td></td>	2.305 <td>.060<td>2.365<td>.060<td>2.305</td></td></td></td>	.060 <td>2.365<td>.060<td>2.305</td></td></td>	2.365 <td>.060<td>2.305</td></td>	.060 <td>2.305</td>	2.305		
					E. C. P. 1/60	2.75 <td>.950<td>2.305<td>.060<td>2.365<td>.060<td>2.305</td></td></td></td></td></td>	.950 <td>2.305<td>.060<td>2.365<td>.060<td>2.305</td></td></td></td></td>	2.305 <td>.060<td>2.365<td>.060<td>2.305</td></td></td></td>	.060 <td>2.365<td>.060<td>2.305</td></td></td>	2.365 <td>.060<td>2.305</td></td>	.060 <td>2.305</td>	2.305		
9	C	do.	Women	a 1.750	E. C. P. 2/40 mer. gas.									
					E. C. P. 1/60	1.00 <td>1.000<td>.813<td>.070<td>.883<td>.022<td>.861</td></td></td></td></td></td>	1.000 <td>.813<td>.070<td>.883<td>.022<td>.861</td></td></td></td></td>	.813 <td>.070<td>.883<td>.022<td>.861</td></td></td></td>	.070 <td>.883<td>.022<td>.861</td></td></td>	.883 <td>.022<td>.861</td></td>	.022 <td>.861</td>	.861		
					E. C. P. 2/40 mer.	2.00 <td>.600<td>.813<td>.070<td>.883<td>.022<td>.861</td></td></td></td></td></td>	.600 <td>.813<td>.070<td>.883<td>.022<td>.861</td></td></td></td></td>	.813 <td>.070<td>.883<td>.022<td>.861</td></td></td></td>	.070 <td>.883<td>.022<td>.861</td></td></td>	.883 <td>.022<td>.861</td></td>	.022 <td>.861</td>	.861		
9	D	do.	do.	a 3.250	E. C. P. 2/40 mer.									
					E. C. P. 2/40 mer.	6.50 <td>4.550<td>2.589<td>.070<td>2.659<td>.067<td>2.592</td></td></td></td></td></td>	4.550 <td>2.589<td>.070<td>2.659<td>.067<td>2.592</td></td></td></td></td>	2.589 <td>.070<td>2.659<td>.067<td>2.592</td></td></td></td>	.070 <td>2.659<td>.067<td>2.592</td></td></td>	2.659 <td>.067<td>2.592</td></td>	.067 <td>2.592</td>	2.592		
					E. C. P. 2/60 mer. gas.	11.25 <td>.600<td>2.589<td>.070<td>2.659<td>.067<td>2.592</td></td></td></td></td></td>	.600 <td>2.589<td>.070<td>2.659<td>.067<td>2.592</td></td></td></td></td>	2.589 <td>.070<td>2.659<td>.067<td>2.592</td></td></td></td>	.070 <td>2.659<td>.067<td>2.592</td></td></td>	2.659 <td>.067<td>2.592</td></td>	.067 <td>2.592</td>	2.592		
9	D	do.	do.	a 3.250	E. C. P. 2/60 mer. gas.									
					E. C. P. 2/60 mer. gas.	2.00 <td>.900<td>2.589<td>.070<td>2.659<td>.067<td>2.592</td></td></td></td></td></td>	.900 <td>2.589<td>.070<td>2.659<td>.067<td>2.592</td></td></td></td></td>	2.589 <td>.070<td>2.659<td>.067<td>2.592</td></td></td></td>	.070 <td>2.659<td>.067<td>2.592</td></td></td>	2.659 <td>.067<td>2.592</td></td>	.067 <td>2.592</td>	2.592		
					E. C. P. 2/120	2.00 <td>.900<td>2.589<td>.070<td>2.659<td>.067<td>2.592</td></td></td></td></td></td>	.900 <td>2.589<td>.070<td>2.659<td>.067<td>2.592</td></td></td></td></td>	2.589 <td>.070<td>2.659<td>.067<td>2.592</td></td></td></td>	.070 <td>2.659<td>.067<td>2.592</td></td></td>	2.659 <td>.067<td>2.592</td></td>	.067 <td>2.592</td>	2.592		
9	D	do.	do.	a 3.250	Cotton									
					E. C. P. 2/60 mer. gas.	2.00 <td>.900<td>2.589<td>.070<td>2.659<td>.067<td>2.592</td></td></td></td></td></td>	.900 <td>2.589<td>.070<td>2.659<td>.067<td>2.592</td></td></td></td></td>	2.589 <td>.070<td>2.659<td>.067<td>2.592</td></td></td></td>	.070 <td>2.659<td>.067<td>2.592</td></td></td>	2.659 <td>.067<td>2.592</td></td>	.067 <td>2.592</td>	2.592		
					E. C. P. 2/120	2.00 <td>.900<td>2.589<td>.070<td>2.659<td>.067<td>2.592</td></td></td></td></td></td>	.900 <td>2.589<td>.070<td>2.659<td>.067<td>2.592</td></td></td></td></td>	2.589 <td>.070<td>2.659<td>.067<td>2.592</td></td></td></td>	.070 <td>2.659<td>.067<td>2.592</td></td></td>	2.659 <td>.067<td>2.592</td></td>	.067 <td>2.592</td>	2.592		
9	D	do.	do.	a 3.250	W. do.									
					E. C. P. 2/60 mer. gas.	2.00 <td>.900<td>2.589<td>.070<td>2.659<td>.067<td>2.592</td></td></td></td></td></td>	.900 <td>2.589<td>.070<td>2.659<td>.067<td>2.592</td></td></td></td></td>	2.589 <td>.070<td>2.659<td>.067<td>2.592</td></td></td></td>	.070 <td>2.659<td>.067<td>2.592</td></td></td>	2.659 <td>.067<td>2.592</td></td>	.067 <td>2.592</td>	2.592		
					E. C. P. 2/120	2.00 <td>.900<td>2.589<td>.070<td>2.659<td>.067<td>2.592</td></td></td></td></td></td>	.900 <td>2.589<td>.070<td>2.659<td>.067<td>2.592</td></td></td></td></td>	2.589 <td>.070<td>2.659<td>.067<td>2.592</td></td></td></td>	.070 <td>2.659<td>.067<td>2.592</td></td></td>	2.659 <td>.067<td>2.592</td></td>	.067 <td>2.592</td>	2.592		
9	D	do.	do.	a 3.250	C. P. 2/36 mer.									
					E. C. P. 2/36 mer.	4.50 <td>.540<td>.646<td>.065<td>.731</td><td>.017<td>.714</td></td></td></td></td>	.540 <td>.646<td>.065<td>.731</td><td>.017<td>.714</td></td></td></td>	.646 <td>.065<td>.731</td><td>.017<td>.714</td></td></td>	.065 <td>.731</td> <td>.017<td>.714</td></td>	.731	.017 <td>.714</td>	.714		
					E. C. P. 2/60 mer. gas.	7.50 <td>.770<td>.646<td>.065<td>.731</td><td>.017<td>.714</td></td></td></td></td>	.770 <td>.646<td>.065<td>.731</td><td>.017<td>.714</td></td></td></td>	.646 <td>.065<td>.731</td><td>.017<td>.714</td></td></td>	.065 <td>.731</td> <td>.017<td>.714</td></td>	.731	.017 <td>.714</td>	.714		
9	D	do.	do.	a 3.250	C. P. 1/70 mer.									
					E. C. P. 1/70 mer.	1.00 <td>1.050<td>.646<td>.065<td>.731</td><td>.017<td>.714</td></td></td></td></td>	1.050 <td>.646<td>.065<td>.731</td><td>.017<td>.714</td></td></td></td>	.646 <td>.065<td>.731</td><td>.017<td>.714</td></td></td>	.065 <td>.731</td> <td>.017<td>.714</td></td>	.731	.017 <td>.714</td>	.714		
					E. C. P. 1/70 mer.	1.00 <td>1.050<td>.646<td>.065<td>.731</td><td>.017<td>.714</td></td></td></td></td>	1.050 <td>.646<td>.065<td>.731</td><td>.017<td>.714</td></td></td></td>	.646 <td>.065<td>.731</td><td>.017<td>.714</td></td></td>	.065 <td>.731</td> <td>.017<td>.714</td></td>	.731	.017 <td>.714</td>	.714		

a Gross price of 1 dozen pairs sold to jobbers or commission houses.

TABLE 56.—DETAILS OF COST OF MATERIALS, PER DOZEN PAIRS OF HOSE, BY ESTABLISHMENTS AND STYLES—Continued.

Estab-lish-ments.	Style.	Seamless or full fashioned.	Made for—	Gross price of 1 dozen pairs to retailers.	Yarn used in 1 dozen pairs.		Cost of materials in 1 dozen pairs.					
					Kind.	Ounces.	Price per pound.	Yarn.	Sundries.	Total.	Discount.	Net material cost.
32	A	Seamless.	Men.....	\$1.500	C. P. 2/40 mer.....	4.32	\$0.470	\$0.544	\$0.050	\$0.594	\$0.016	\$0.578
					C. P. 2/50 mer.....	8.64	.550					
32	B	do.	do.....	\$3.500	C. P. 1/30 mer.....	1.92	.860					
					C. P. 2/36 mer.....	4.16	.433					
					C. P. 2/40 mer.....	1.64	.580					
					K. P. 1/32.....	1.12	.285	2.008	.058	2.066	.054	2.012
32	C	do.	Women.....	\$1.000	Jap. tram silk 17 thread.....	6.08	.430					
					S. K. P. 1/17.....	28.80	.240	.453	.028	.481	.013	.468
32	D	do.	do.....	\$1.850	S. K. P. 1/60.....	.80	.420					
					C. P. 1/70 mer.....	4.64	.580					
					C. P. 1/80 denier.....	11.04	.317	.877	.050	.927	.024	.903
					C. P. 2/60.....	2.02	.520					
					K. P. 1/60.....	1.04	.430					
2	E	do.	do.....	\$3.500	Art. silk 130 denier.....	5.76	2.010					
					C. P. 2/60 mer.....	11.04	.650	1.774	.057	1.831	.048	1.783
3	A	do.	Men.....	2.100	C. P. 1/70 mer.....	1.60	.860					
					Jap. tram silk 13 thread.....	4.00	1.50					
					C. P. 1/70 mer.....	1.60	1.08					
					C. P. 2/40 mer. gas.....	4.00	.620					
					C. P. 2/60 mer.....	5.00	.640	.980	.050	1.030	.009	1.021
3	B	do.	do.....	3.750	Art. silk 150 denier.....	4.00	1.820					
					C. P. 1/60 mer.....	2.00	.850					
					C. P. 2/60 mer. gas.....	4.00	.620					
					C. P. 2/40 mer. gas.....	5.00	.700	2.020	.020	2.070	.019	2.060
					Jap. tram silk 17 thread.....	6.08	.430					
4	A	do.	do.....	1.100	C. S. I. 2/150 mer. gas.....	10.00	2.000					
					E. C. P. 1/14.....	6.00	.230					
					E. C. P. 1/18.....	10.00	.280	.404	.030	.434	.011	.423
					E. C. P. 1/24.....	4.00	.320					
					E. C. P. 1/70.....	1.50	.670					
					E. C. P. 2/40 mer.....	5.25	.520					
4	B	do.	do.....	2.050	C. P. 2/60 mer.....	1.25	.620	.704	.060	.764	.020	.744
					C. S. I. 2/120.....	1.25	1.650					

54	C	do.	do.	2.050	E. C. P. 2/30 mer.	5.50	.820	.680	.060	.740	.019	.721
					C. P. 2/70 mer.	1.25	.620					
					C. S. I. 2/120.	1.50	1.650					
54	D	do.	do.	4.150	C. P. 2/40 mer.	4.38	.550	1.774	.060	1.834	.047	1.787
					Jap. tram silk 11 thread.	4.13	.520					
					C. S. I. 2/120.	1.35	1.650					
54	E	do.	do.	4.150	E. C. P. 2/40 mer.	4.25	.530					
					C. P. 2/40 mer.	2.87	.450	1.531	.060	1.591	.041	1.550
					Jap. tram silk 6 thread.	4.12	1.650					
					C. S. I. 2/120.	1.40	.480					
55	A	do.	do.	2.150	E. C. P. 1/70 mer.	2.80	.620	1.018	.060	1.078	.019	1.059
					E. C. P. 2/50 mer.	3.20	.540					
					E. C. P. 2/40 mer.	3.20	.540					
					Art. silk 150 denier.	4.40	.2150					
55	B	do.	do.	2.050	E. C. P. 2/80 mer.	5.00	.920					
					E. C. P. 2/40 mer.	3.60	.740	.662	.060	.722	.013	.709
					E. C. P. 2/60 mer.	4.00	.770					
					E. C. P. 1/70 mer.	4.80	1.020					
55	C	do.	do.	2.050	E. C. P. 2/40 mer.	11.80	.730	.697	.060	.757	.013	.744
					E. C. P. 2/40 mer.	3.20	.540					
					E. C. P. 1/70 mer.	3.80	1.020					
56	A	do.	do.	\$1.500	E. C. P. 2/36 mer. gas.	5.50	.560	.587	.050	.637	.014	.623
					C. P. 2/40 mer.	9.50	.720					
					C. P. 2/60 mer.	5.50	.560					
56	B	do.	do.	\$1.650	C. P. 2/36 mer. gas.	9.00	.650					
					C. S. I. 1/70 mer.	1.25	1.070	.709	.050	.759	.016	.743
					C. S. I. 1/70 mer.	1.00	1.070					
					C. P. 2/36 mer. gas.	5.00	.560					
56	C	do.	do.	\$1.850	Art. silk 150 denier.	3.00	1.850					
					C. P. 2/40 mer.	3.00	1.070	1.240	.050	1.290	.027	1.263
					C. S. I. 1/70 mer.	5.50	.590					
					C. S. I. 2/30 mer. gas.	5.50	.590					
56	D	do.	do.	\$3.250	Jap. tram silk 10 thread.	5.00	.4900	2.043	.050	2.093	.044	2.049
					C. S. I. 2/140 mer. gas.	1.00	1.850					
					C. P. 2/60 mer.	17.00	.600					
57	A	do.	do.	2.100	E. C. P. 2/30 mer.	27.00	.600	.638	.040	.678	.014	.664
57	B	do.	Women	2.050	E. C. P. 2/30 mer.	7.25	.420	1.129	.040	1.169	.024	1.145
57	C	do.	do.	2.050	E. C. P. 2/30 mer.	23.25	.370	.727	.030	.757	.016	.741
					E. C. P. 2/30 mer.	20.63	.325	.811	.040	.851	.018	.833
57	D	do.	Children	2.800	C. P. 2/40 mer.	4.50	.475					
					E. C. P. 1/16.	14.00	.300					
					E. C. P. 1/18.	1.00	.345	.376	.025	.401	.013	.388
58	A	do.	Men	1.100	E. C. P. 1/30.	1.00	.345					

a Gross price of 1 dozen pairs sold to jobbers or commission houses.

TABLE 56.—DETAILS OF COST OF MATERIALS, PER DOZEN PAIRS OF HOSE, BY ESTABLISHMENTS AND STYLES—Continued.

Estab-lish-ments.	Style.	Seamless or full fashioned.	Made for—	Gross price of 1 dozen pairs to retailers.	Yarn used in 1 dozen pairs.		Ounces.	Price per pound.	Cost of materials in 1 dozen pairs.				
					Kind.	(For an explanation of abbreviations see p. 187.)			Yarn.	Sundries.	Total.	Discount.	Net material cost.
58.....	B	Seamless.....	Men.....	\$2.000	E. C. P. 2/60 mer.....	12.00	\$0.810	\$0.836	\$0.045	\$0.881	\$0.029	\$0.852	
58.....	C	do.....do.....	do.....	4.000	E. C. P. 2/40 mer.....	3.50	.560						
59.....	A	do.....do.....	Children.....	2.150	Jap. tram silk, 12-thread.....	1.50	1.120						
59.....	B	do.....do.....	do.....	2.150	E. C. P. 1/80 mer.....	4.00	6.560						
59.....	C	do.....do.....	do.....	2.150	E. C. P. 2/40 mer.....	4.00	1.120	2.114	.045	2.159	.070	2.089	
59.....	D	do.....do.....	do.....	2.400	E. C. P. 2/60 mer.....	6.00	.810						
59.....	E	do.....do.....	Children.....	2.150	E. K. P. 1/11.....	48.00	.220	.660	.050	.710	.020	.690	
59.....	F	do.....do.....	Men.....	2.400	C. Eg. liste 2/26.....	24.00	.420	.680	.050	.680	.019	.661	
59.....	G	do.....do.....	do.....	2.400	C. Eg. liste 2/40.....	24.00	.380	.600	.050	.650	.018	.632	
59.....	H	do.....do.....	do.....	2.400	C. Eg. 2/30 mer.....	22.00	.700	.963	.060	1.023	.017	.997	
59.....	I	do.....do.....	do.....	2.400	C. S. I. 3/60 mer.....	24.00	1.100	1.650	.100	1.750	.049	1.701	
59.....	J	do.....do.....	Women.....	2.400	C. Eg. liste 2/50.....	25.00	.530	1.650	.050	.875	.025	.850	
59.....	K	do.....do.....	do.....	2.400	C. Eg. 2/30 mer.....	24.00	.750	1.125	.100	1.225	.034	1.191	
59.....	L	do.....do.....	Men.....	2.050	E. C. P. 2/30 mer.....	5.00	.550	.660	.080	.740	.013	.727	
59.....	M	do.....do.....	do.....	4.100	E. C. P. 1/70 mer.....	12.00	.610						
59.....	N	do.....do.....	do.....	4.100	E. C. P. 2/34 mer.....	5.00	.950						
59.....	O	do.....do.....	do.....	4.100	Jap. tram silk, 10-thread.....	6.00	4.150	1.805	.080	1.885	.034	1.851	
59.....	P	do.....do.....	Women.....	2.750	E. C. P. 2/60.....	1.50	.680						
59.....	Q	do.....do.....	do.....	4.000	E. C. P. 2/40 mer.....	28.00	.610						
59.....	R	do.....do.....	do.....	4.000	C. S. I. 2/40.....	28.00	(a)	1.097	.060	1.187	.021	1.166	
59.....	S	do.....do.....	do.....	4.000	E. C. P. 2/50 mer.....	25.00	.950						
59.....	T	do.....do.....	do.....	6.250	E. C. P. 1/70 mer.....	1.00	.950	1.154	.060	1.244	.022	1.222	
59.....	U	do.....do.....	do.....	6.250	E. C. P. 2/60 mer.....	9.00	.750						
59.....	V	do.....do.....	do.....	6.250	Jap. tram silk, 10-thread.....	7.50	4.150	2.541	.090	2.631	.047	2.584	
59.....	W	do.....do.....	do.....	6.250	C. Eg. 2/34 mer.....	2.00	.610						
59.....	X	do.....do.....	Children.....	2.150	E. C. P. 1/80 mer.....	30.00	.275						
59.....	Y	do.....do.....	do.....	2.150	E. C. P. 1/34.....	2.00	.340	.810	.090	.900	.016	.884	
59.....	Z	do.....do.....	do.....	2.150	E. C. P. 2/30.....	9.50	.315						
59.....	AA	do.....do.....	do.....	2.150	E. C. P. 2/40.....	1.50	.700						
59.....	AB	do.....do.....	Children.....	2.150	C. Eg. 2/30 mer.....	5.00	.550	.630	.080	.710	.013	.697	
59.....	AC	do.....do.....	Men.....	2.050	C. Eg. 2/30 mer.....	11.00	.650						
59.....	AD	do.....do.....	do.....	2.050	C. S. I. 2/40.....	2.00	.650						
59.....	AE	do.....do.....	do.....	2.150	C. Eg. 2/32 mer.....	4.60	.530	.598	.050	.648	.019	.629	
59.....	AF	do.....do.....	do.....	2.150	C. Eg. 2/40 mer.....	10.00	.580						
59.....	AG	do.....do.....	do.....	2.150	C. S. I. 2/40 mer.....	2.00	.670						

61.....	B	do.....	do.....	2.750	C. Eg. 2/32 mer.....	4.80	.530	.759	.050	.809	.785
61.....	C	do.....	do.....	4.250	C. Eg. 3/60 mer.....	1.40	.750				
61.....	D	do.....	do.....	2.900	C. S. I. 1/70 mer.....	1.20	1.020	1.402	.075	1.477	1.433
61.....	E	do.....	do.....	4.250	Jap. tram silk, 5-thread.....	2.50	.420				
61.....	F	do.....	do.....	2.900	C. S. I. 2/2100 mer.....	3.00	.210	1.004	.050	1.054	1.023
61.....	G	do.....	do.....	4.250	C. S. I. 4/54 mer.....	12.00	.520				
61.....	H	do.....	do.....	2.900	C. Eg. 3/45.....	14.00	.500	1.275	.050	1.325	1.286
61.....	I	do.....	do.....	4.250	C. S. I. 3/60.....	2.00	.620				
61.....	J	do.....	do.....	2.900	C. S. I. 3/60 mer.....	8.00	.780	.762	.050	.812	.788
61.....	K	do.....	do.....	2.900	C. S. I. 3/60 mer.....	13.00	.970	1.020	.050	1.070	1.038
61.....	L	do.....	do.....	2.900	E. C. P. 2/32.....	20.00	.225	.165	.025	.190	.187
61.....	M	do.....	do.....	2.900	E. C. P. 3/40.....	20.00	.225	.281	.025	.306	.301
61.....	N	do.....	do.....	2.900	E. C. P. 3/40.....	20.00	.225	.304	.033	.337	.337
61.....	O	do.....	do.....	2.900	C. S. I. 3/60.....	1.00	.410				
61.....	P	do.....	do.....	2.900	E. C. P. 3/25.....	6.00	.465				
61.....	Q	do.....	do.....	2.900	E. C. P. 3/25.....	38.30	.340				
61.....	R	do.....	do.....	2.900	E. C. P. 3/25.....	7.40	.690				
61.....	S	do.....	do.....	2.900	C. S. I. 3/60.....	1.00	.630				
61.....	T	do.....	do.....	2.900	E. C. P. 3/25.....	12.00	.220	.165	.025	.190	.187
61.....	U	do.....	do.....	2.900	E. C. P. 3/25.....	20.00	.225	.281	.025	.306	.301
61.....	V	do.....	do.....	2.900	E. C. P. 3/25.....	27.00	.180	.304	.033	.337	.337
61.....	W	do.....	do.....	2.900	75 and 95 grain wool-spun merino, 50 per cent wool.....	27.00	.175	.285	.033	.328	.328
61.....	X	do.....	do.....	2.900	75 and 95 grain wool-spun merino, 30 per cent wool.....	27.00	.175	.291	.033	.324	.324
61.....	Y	do.....	do.....	2.900	75 and 95 grain wool-spun merino, 10 per cent wool.....	27.00	.175	.291	.033	.324	.324
61.....	Z	do.....	do.....	2.900	75 and 95 grain wool-spun merino, 8 per cent wool.....	27.00	.175	.291	.033	.324	.324
61.....	AA	do.....	do.....	2.900	Merino, 20 per cent wool.....	32.00	.180	.360	.035	.395	.395
61.....	AB	do.....	do.....	2.900	Merino, 10 per cent wool.....	32.00	.180	.360	.035	.395	.395
61.....	AC	do.....	do.....	2.900	Merino, 40 per cent wool.....	32.00	.200	.400	.035	.435	.435
61.....	AD	do.....	do.....	2.900	E. C. P. 1/15.....	4.50	.270	.313	.063	.376	.375
61.....	AE	do.....	do.....	2.900	E. C. P. 1/15.....	4.50	.270				
61.....	AF	do.....	do.....	2.900	E. C. P. 1/15.....	5.50	.330				
61.....	AG	do.....	do.....	2.900	E. C. P. 1/15.....	3.75	.280	.254	.063	.317	.316
61.....	AH	do.....	do.....	2.900	E. C. P. 1/15.....	3.00	.330				
61.....	AI	do.....	do.....	2.900	E. C. P. 1/15.....	32.50	.220	.440	.053	.493	.492
61.....	AJ	do.....	do.....	2.900	E. C. P. 1/15.....	36.00	.240	.540	.053	.593	.591
61.....	AK	do.....	do.....	2.900	Merino 2/30, 50 per cent wool.....	7.00	.340				
61.....	AL	do.....	do.....	2.900	Merino 2/30, 50 per cent wool.....	7.00	.340	.652	.073	.725	.723
61.....	AM	do.....	do.....	2.900	E. K. P. 1/15.....	4.50	.700				
61.....	AN	do.....	do.....	2.900	54-grain merino, 35 per cent wool.....	15.00	.3125	.850	.062	.912	.912
61.....	AO	do.....	do.....	2.900	90-grain merino, 55 per cent wool.....	4.20	.310				
61.....	AP	do.....	do.....	2.900	100-grain merino, 30 per cent wool.....	30.50	.165	.370	.041	.411	.411
61.....	AP	do.....	do.....	2.900	100-grain merino, 30 per cent wool.....	5.00	.190				

c No discount, material is net.

b Gross price of one dozen pairs sold to jobbers or commission houses.

a Included with other yarns used.



TABLE 56.—DETAILS OF COST OF MATERIALS, PER DOZEN PAIRS OF HOSE, BY ESTABLISHMENTS AND STYLES—Continued.

Estab-lish-ments.	Style.	Seamless or full fashioned.	Made for—	Gross price of 1 dozen pairs to retailers.	Yarn used in 1 dozen pairs.		Price per pound.	Cost of materials in 1 dozen pairs.				
					Kind.	Ounces.		Yarn.	Sundries.	Total.	Discount.	Net material cost.
					(For an explanation of abbreviations see p. 187.)							
69.....	C	Seamless.....	Women.....	a \$1.900	66-grain merino, 58 per cent wool.....	50.00	\$0.286	\$0.950	\$0.047	\$0.997	(b)	\$0.997
69.....	D	do.....	do.....	a 1.250	76-grain merino, 30 per cent wool.....	5.00	.240					.240
69.....	E	do.....	Infants.....	a 1.050	58-grain merino, 30 per cent wool.....	39.00	.220	.611	.047	.658	(b)	.658
69.....	F	do.....	do.....	a 1.050	E. K. P. 1/27 in black.....	6.00	.330					.330
69.....	F	do.....	do.....	a 1.050	46-grain wool, 1/40.....	5.00	.330	.447	.047	.494	(b)	.494
70.....	A	do.....	Men.....	a 1.650	51-grain merino, 35 per cent wool.....	1.25	.285					.285
70.....	A	do.....	Men.....	a 1.650	62-grain merino, 30 per cent wool.....	1.25	.245	.154	.047	.201	(b)	.201
70.....	B	do.....	do.....	a 1.600	E. K. P. 1/27 in black.....	2.40	.345					.345
70.....	B	do.....	do.....	a 1.600	Auss. wool.....	6.25	.360	.504	.060	.564	\$0.008	.556
70.....	C	do.....	do.....	a 1.550	E. K. P. mixed.....	4.75	.390					.390
70.....	C	do.....	do.....	a 1.550	E. K. P. 1/16.....	3.00	.340					.340
70.....	D	do.....	do.....	a 1.550	E. K. P. 1/28 mixed.....	13.125	.320	.741	.062	.803	.012	.791
70.....	D	do.....	do.....	a 1.750	46-grain merino, 40 per cent wool.....	2.50	.340					.340
70.....	E	do.....	do.....	a 1.750	K. K. 1/18, K. P. 1/14.....	3.90	.320	.672	.063	.735	.011	.724
70.....	F	do.....	do.....	a 1.750	40-grain merino, 40 per cent wool.....	2.00	.340					.340
70.....	F	do.....	do.....	a 1.750	E. K. P. 1/28 mixed.....	1.00	.300	.731	.075	.806	.012	.794
70.....	F	do.....	do.....	a 1.750	Merino, 35 per cent cotton.....	37.00	.300	.555	.075	.630	.009	.621
70.....	F	do.....	do.....	a 1.750	Merino, 50 per cent cotton.....	37.00	.240					.240
70.....	F	do.....	do.....	a 1.750	E. K. P. 1/13.....	20.664	.320					.320
70.....	F	do.....	do.....	a 1.750	46-grain wool, 1/40.....	10.334	.320	1.007	.075	1.082	.015	1.067
70.....	F	do.....	do.....	a 1.750	E. K. P. 1/28 mixed.....	2.00	.340					.340
70.....	F	do.....	do.....	a 1.750	95-grain wool-spun merino, 70 per cent cotton, 30 per cent wool.....	31.04	.340					.340
71.....	A	do.....	Men.....	a 1.000	105-grain wool-spun merino, 65 per cent cotton, 35 per cent wool.....	4.764	.260	.352	.050	.402	.005	.397
71.....	B	do.....	do.....	a 1.800	87-grain wool-spun merino, 20 per cent cotton, 80 per cent wool.....	32.48	.360	.842	.050	.892	.012	.880
71.....	B	do.....	do.....	a 1.800	45-grain wool-spun merino, 40 per cent cotton, 60 per cent wool.....	5.244	.230					.230
71.....	C	do.....	do.....	a 1.875	S. K. P. 1/12.....	15.551/6	.275	.287	.015	.302	.004	.298
71.....	C	do.....	do.....	a 1.875	52-grain wool-spun merino, 68 per cent cotton, 32 per cent wool.....	3.648	.275					.275

71.....	D	do.....	do.....	a 1.750	S. K. P. 1/16 in black.....	12.576	.270	.661	.050	.711	.702
71.....	E	do.....	Women.....	a 1.900	50/75 mock twist 2/16 in black.....	7.856	.330				
71.....	F	do.....	do.....	a 1.900	Dom. 1/40, 1/2 blood.....	39.04	.332	.872	.056	.928	.916
71.....	G	do.....	do.....	a 1.900	46-grain wool-spun merino, 60 per cent cotton, 40 per cent wool.....	38.56	.205	.549	.055	.604	.596
71.....	H	do.....	do.....	a 3.625	50/75 mock twist 2/16 in black.....	3.408	.258				
71.....	I	do.....	Men.....	a 3.600	46-grain wool-spun merino, 60 per cent cotton, 40 per cent wool.....	3.408	.258				
71.....	J	do.....	do.....	a 1.800	52-grain wool-spun merino, 68 per cent cotton, 32 per cent wool.....	16.50	.900	1.297	.067	1.364	1.347
71.....	K	do.....	do.....	a 3.375	1/2 Australian, 1/2 domestic 1/45.....	16.50	.275	1.250	.067	1.317	1.300
71.....	L	do.....	do.....	a 3.375	E. K. P. 1/30 in black.....	16.16	.275	1.327	.075	1.402	1.384
71.....	A	Seamless	Women.....	2.250	50/60 merino 2/35.....	16.16	.900	1.250	.067	1.317	1.300
72.....	B	do.....	do.....	2.150	50/60 merino 2/35.....	16.16	.900	1.327	.075	1.402	1.384
72.....	C	do.....	do.....	2.250	E. K. P. 1/30.....	9.36	.545	.394	.065	.459	.453
72.....	D	do.....	do.....	2.750	46-grain merino, 40 per cent wool.....	4.768	.419				
72.....	E	do.....	do.....	.425	Stained Ekg. 2/28.....	9.648	.273				
72.....	F	do.....	Children.....	1.150	C. P. 2/30 mer.....	10.592	.900	1.139	.065	1.204	1.188
72.....	G	do.....	do.....	2.100	E. C. P. 1/20 in black.....	10.592	.900				
72.....	H	do.....	Misses.....	2.100	Aus. wd. 1/34.....	5.00	.820	1.139	.065	1.204	1.188
72.....	I	do.....	do.....	2.250	E. C. P. 1/20 in black.....	5.00	.820				
72.....		do.....	do.....		50/60 merino 1/45.....	1.696	1.420				
72.....		do.....	do.....		Aus. wd. 1/45.....	13.968	.966	1.248	.065	1.313	1.296
72.....		do.....	do.....		1/2 Aus., 1/2 dom. 2/45.....	4.736	.916				
72.....		do.....	do.....		50/60 merino 2/35.....	1.36	.703				
72.....		do.....	do.....		E. C. P. 1/70 in black.....	1.34	.633	.438	.020	.458	.448
72.....		do.....	do.....		C. K. P. 1/12.....	35.00	.203	.438	.020	.458	.448
72.....		do.....	do.....		C. P. 2/44.....	23.00	.440	.764	.087	.801	.783
72.....		do.....	do.....		C. P. 1/32.....	6.00	.350				
72.....		do.....	do.....		C. P. 2/36.....	28.00	.440	.975	.048	1.023	1.000
72.....		do.....	do.....		C. P. 2/30.....	8.00	.410				
72.....		do.....	do.....		C. P. 2/50 mer.....	22.50	.660				
72.....		do.....	do.....		C. F. 2/32 mer.....	7.00	.360	1.067	.042	1.109	1.064
72.....		do.....	do.....		Jap. tram. silk, 10-thread.....	3.950	.700				
72.....		do.....	do.....		C. P. 2/30 mer.....	9.00	.580	2.230	.040	2.270	2.219
72.....		do.....	do.....		C. P. 2/30 mer.....	3.00	.580				
72.....		do.....	do.....		S. K. P. 1/16, S. K. P. 1/14.....	23.00	.245	.332	.080	.382	.373
72.....		do.....	do.....		S. K. P. 1/16, S. K. P. 1/14.....	48.00	.245	.735	.048	.775	.755
72.....		do.....	do.....		C. P. 2/47 mer.....	12.00	.640	.620	.033	.653	.638
72.....		do.....	do.....		C. P. 2/32.....	4.00	.840				
72.....		do.....	do.....		C. P. 2/47 mer.....	15.00	.560	.835	.087	.972	.960

TABLE 56.—DETAILS OF COST OF MATERIALS, PER DOZEN PAIRS OF HOSE, BY ESTABLISHMENTS AND STYLES—Continued.

Estab-lish-ments.	Style.	Seamless or full fashioned.	Made for—	Gross price of 1 dozen pairs to retailers.	Yarn used in 1 dozen pairs.		Cost of materials in 1 dozen pairs.					
					Kind.	Ounces.	Price per Pound.	Yarn.	Sundries.	Total.	Discount.	Net material cost.
72	J	Seamless	Children	\$1.900	C. P. 2/36	8.00	\$0.440	\$0.323	\$0.029	\$0.352	\$0.008	\$0.344
72	K	do.	Misses	2.100	C. P. 2/36	18.00	.440	.598	.033	.631	.014	.617
72	L	do.	Men	.875	C. P. 2/30	4.00	.410	.336	.....	.336	.008	.328
72	M	do.	do.	1.100	K. P. 1/12	28.00	.195	.431	.025	.456	.010	.446
72	N	do.	do.	2.100	K. P. 1/12	30.00	.230	.859	.040	.899	.020	.879
72	O	do.	do.	2.150	Grain 1/68	18.00	.300	.914	.035	.949	.021	.928
72	P	do.	do.	2.150	Merino 78 grain white	34.00	.430	.905	.041	.946	.021	.925
72	Q	do.	do.	2.250	Art. silk 130 denier	4.00	.560	.850	.036	.886	.020	.866
72	R	do.	do.	2.250	C. P. 2/40	4.50	.600	.833	(b)	.833	.019	.814
72	A	do.	do.	2.050	C. P. 2/30	20.00	.380	.611	.037	.648	.013	.635
73	B	do.	do.	1.100	C. S. 1/28 mer	36.00	.370	.308	.020	.328	.007	.321
73	C	do.	do.	2.000	C. Eg. 2/36 mer	12.00	.520	.595	.036	.631	.013	.618
73	D	do.	do.	2.150	C. Eg. 1/28	8.00	.400	1.028	.029	1.057	.021	1.036
73	E	do.	Women	2.150	C. P. 2/40	5.80	.490	.950	.026	.976	.020	.956
73	F	Full fashioned	do.	4.250	C. P. 2/34 mer	19.04	.220	1.055	.056	1.111	.022	1.089

73	G	do.	do.	2.250	C. P. 1/19 skein in black	24.16	.400	.781	.035	.816	.016	.800
73	H	do.	do.	2.150	C. Eg. 1/18	2.40	.380	.630	.034	.664	.013	.651
73	I	Seamless	Children	2.000	C. P. 1/20	1.60	.530	.841	.025	.866	.017	.849
73	J	do.	do.	1.100	C. P. 1/50	31.20	.300	.452	.012	.464	.009	.455
73	K	do.	do.	2.150	C. P. 2/20	1.00	.280	.766	.025	.791	.016	.775
73	L	do.	do.	1.250	C. P. 1/40	37.64	.320	.566	.014	.580	.012	.568
73	M	do.	do.	2.000	C. P. 1/80	.64	.900	.788	.025	.813	.016	.797
					C. P. 1/30	1.92	.350					
					K. P. 1/10	24.80	.220					
					K. P. 1/71	4.80	.200					
					K. P. 1/30	1.92	.280					
					K. P. 1/30	18.08	.510					
					C. P. 2/40 mer	4.48	.480					
					C. P. 2/60 mer	.96	.410					
					C. P. 1/40	28.32	.780					
					K. P. 1/18	3.20	.280					
					K. P. 1/30	50.88	.225					
					K. P. 1/30	1.28	.280					
					K. P. 1/30	3.36	.245					

<sup>a</sup> Included with other yarn used.<sup>b</sup> Included with yarn.

## COST OF DIRECT LABOR IN UNITS.

Table 57, like Table 56, is supplementary to Tables 50 and 51. This table shows the cost of the different direct-labor operations in the manufacture of each style for which figures are furnished. Sewing includes sewing the welt where the welt is not integral and sewing up the toe where it is not closed by looping. Finishing includes boarding, pressing, matching, labeling, and boxing.

TABLE 57.—DETAILS OF COST OF DIRECT LABOR, PER DOZEN PAIRS OF HOSE, BY ESTABLISHMENTS AND STYLES.

[NOTE.—The styles are designated by letters for convenience of reference to Tables 50, 51, and 56. The same letter applied to the products of different establishments does not indicate identity or even similarity of styles.]

Estab-lish-ments.	Style.	Seamless or full fashioned.	Local-ity.	Gross price of one dozen pairs to retailers.	Cost of direct labor.					
					Bleach-ing or dyeing.	Wind-ing and knitting.	Loop-ing.	Sew-ing.	Finish-ing.	Total.
1.....	A	Full fashioned.	East.	\$1.950	\$0.105	\$0.385	\$0.065	\$0.070	\$0.138	\$0.763
1.....	B	do.	do.	2.900	.108	.467	.075	.078	.148	.876
1.....	C	do.	do.	3.500	.115	.542	.075	.080	.154	.966
2.....	A	do.	do.	4.000	.182	.672	.075	.085	.233	1.247
2.....	B	do.	do.	6.500	.300	.920	.095	.140	.400	1.855
2.....	C	do.	do.	7.250	.350	.950	.095	.140	.400	1.935
3.....	A	do.	do.	1.950	.090	.415	.070	.070	.140	.705
3.....	B	do.	do.	2.900	.110	.580	.065	.080	.160	.905
3.....	C	do.	do.	2.900	.110	.580	.065	.080	.160	.905
3.....	D	do.	do.	2.650	.140	.550	.065	.080	.150	.985
3.....	E	do.	do.	4.000	.200	.790	.070	.070	.190	1.320
3.....	F	do.	do.	3.850	.120	.750	.070	.090	.160	1.190
3.....	G	do.	do.	8.500	.070	1.325	.120	.130	.340	1.915
4.....	A	do.	do.	2.500	.070	.290	.055	.060	.060	.535
4.....	B	do.	do.	3.800	.110	.555	.055	.080	.075	.875
4.....	C	Seamless.	do.	1.825	.075	.225	.050	.050	.040	.440
4.....	D	do.	do.	1.850	.060	.200	.055	.055	.055	.370
6.....	A	Full fashioned.	do.	6.650	.1243	.080	.100	.340	1.763	
6.....	B	do.	do.	6.750	.1168	.080	.080	.330	1.658	
7.....	A	do.	do.	8.500	.1280	.130	.100	.380	1.950	
7.....	B	do.	do.	12.000	.1380	.130	.100	.380	2.050	
7.....	C	do.	do.	8.500	.1350	.130	.100	.380	2.020	
7.....	D	do.	do.	11.500	.1500	.130	.100	.380	2.220	
7.....	E	do.	do.	21.500	.3.620	.130	.220	.480	4.450	
8.....	A	Seamless.	do.	1.400	.060	.160	.070	.120	.410	
8.....	B	do.	do.	1.550	.060	.160	.070	.120	.410	
8.....	C	do.	do.	1.825	.100	.170	.070	.120	.460	
8.....	D	Full fashioned.	do.	3.500	.100	.470	.060	.060	.120	.805
8.....	E	do.	do.	3.625	.100	.570	.075	.085	.120	.990
8.....	F	do.	do.	3.625	.100	.630	.085	.055	.120	.990
9.....	A	do.	West.	2.100	.110	.360	.105	.065	.170	.810
9.....	B	do.	do.	2.750	.080	.500	.125	.090	.235	1.030
9.....	C	do.	do.	4.000	.180	.730	.160	.090	.245	1.405
9.....	D	do.	do.	2.000	.070	.310	.190	.050	.215	.835
9.....	E	do.	do.	2.750	.060	.460	.245	.065	.230	1.060
11.....	A	Seamless.	East.	1.000	.074	.040	.070	.028	.318	
11.....	B	do.	do.	1.000	.065	.040	.075	.033	.105	
12.....	A	do.	do.	3.000	.128	.200	.065	.090	.230	.653
12.....	B	do.	do.	4.000	.159	.320	.065	.050	.270	.864
12.....	C	do.	do.	4.000	.145	.160	.065	.050	.250	.670
13.....	A	do.	do.	.425	.040	.030	.025	.055	.150	
13.....	B	do.	do.	.750	.050	.020	.035	.095	.200	
13.....	C	do.	do.	.855	.065	.020	.035	.095	.215	
14.....	A	do.	do.	.425	.020	.010	.045	.052	.127	
14.....	B	do.	do.	1.150	.060	.040	.055	.055	.110	.265
14.....	C	do.	do.	1.150	.060	.040	.055	.055	.110	.265
14.....	D	do.	do.	2.150	.060	.040	.055	.055	.110	.265
14.....	E	do.	do.	1.150	.060	.040	.055	.055	.110	.265
14.....	F	do.	do.	1.150	.060	.120	.055	.055	.110	.345
15.....	A	do.	do.	1.000	.065	.045	.060	.025	.125	.320
				.975						

\* Gross price of one dozen pairs sold to jobbers or commission houses.

TABLE 57.—DETAILS OF COST OF DIRECT LABOR, PER DOZEN PAIRS OF HOSE, BY ESTABLISHMENTS AND STYLES—Continued.

Estab-lish-ments.	Style.	Seamless or full fashioned.	Local-ity.	Gross price of one dozen pairs to retailers.	Cost of direct labor.					
					Bleach-ing or dyeing.	Wind-ing and knitting.	Loop-ing.	Sew-ing.	Finish-ing.	Total.
15.....	B	Seamless.....	East..	\$2.000 a 1.750	\$0.070	\$0.045	\$0.060	\$0.025	\$0.125	\$0.325
15.....	C	do.....	do.....	1.750	.101	.045	.060	.025	.135	.366
17.....	A	do.....	do.....	a .775	.063	.038	.051	.015	.074	.241
17.....	B	do.....	do.....	a .975	.075	.165	.051		.077	.368
17.....	C	do.....	do.....	a .750	.050	.125	.051		.074	.300
18.....	A	do.....	do.....	a 1.000	.060	.190	.045		.070	.365
18.....	B	do.....	do.....	a .050	.020	.050	.015		.070	.235
18.....	C	do.....	do.....	a 1.000	.100	.020	.050	.015	.070	.255
18.....	D	do.....	do.....	a .725	.060	.118	.047		.070	.295
18.....	E	do.....	do.....	a 1.050	.100	.135	.040		.070	.345
19.....	A	do.....	do.....	a .950	.060	.038	.065	.020	.082	.265
19.....	B	do.....	do.....	a 1.650	.065	.040	.070	.038	.092	.305
21.....	A	do.....	do.....	a .800		.070		.030	.089	.189
21.....	B	do.....	do.....	a 1.000	.075	.060	.025	.035	.095	.255
21.....	C	do.....	do.....	a 1.750	.080	.070	.030	.104	.284	
22.....	A	do.....	do.....	a 1.750	.060	.053	.070	.020	.110	.313
22.....	B	do.....	do.....	a 1.850	.070	.113	.070	.020	.140	.413
22.....	C	do.....	do.....	a 1.700	.110	.153	.050		.150	.463
23.....	A	do.....	do.....	a .950	.075	.150	.020		.120	.365
23.....	B	do.....	do.....	a 1.650	.090	.165	.020		.135	.410
23.....	C	do.....	do.....	a .700	.030	.180			.100	.330
23.....	D	do.....	do.....	a .450	.020	.050		.015	.150	
23.....	E	do.....	do.....	a .894	.045	.160	.020		.100	.325
24.....	A	do.....	do.....	a 1.050	.020	.139	.051		.097	.307
24.....	B	do.....	do.....	a 1.025	.022	.150	.061		.099	.332
24.....	C	do.....	do.....	a 1.025	.020	.154	.067		.106	.347
24.....	D	do.....	do.....	a 1.025	.020	.154	.067		.106	.347
24.....	E	do.....	South.	a .975	.038	.040	.045	.016	.063	.202
26.....	A	do.....	do.....	a 1.150	.038	.040	.045	.016	.063	.202
27.....	A	do.....	do.....	a .575		.073	.040		.025	.138
27.....	B	do.....	do.....	a .485		.063	.035		.025	.123
27.....	C	do.....	do.....	a .600		.020	.040	.015	.025	.100
27.....	D	do.....	do.....	a .600		.030		.025	.080	
28.....	A	do.....	do.....	a .775	.045	.080	.025		.069	.219
28.....	B	do.....	do.....	a 1.050	.075	.080	.028		.091	.284
28.....	C	do.....	do.....	a .825	.045	.080	.035		.089	.269
29.....	A	do.....	do.....	a .975	.065	.080	.035		.089	.269
29.....	B	do.....	do.....	a .700	.040	.070	.030		.035	.175
29.....	C	do.....	do.....	a .725	.030	.090	.040		.035	.195
29.....	D	do.....	do.....	a .800	.035	.090	.040		.035	.200
30.....	A	do.....	do.....	a .700	.038	.010	.040	.010	.053	.151
30.....	B	do.....	do.....	a .650	.033	.078			.053	.202
30.....	C	do.....	do.....	a .675	.028	.075	.035		.055	.193
33.....	A	do.....	do.....	a .975	.010	.075	.045		.064	.194
33.....	B	do.....	do.....	a .950	.010	.075	.045		.066	.196
33.....	C	do.....	do.....	a .750	.010	.100	.040		.051	.201
33.....	D	do.....	do.....	a .925	.005	.100	.040		.051	.196
33.....	E	do.....	do.....	a 1.000	.010	.020	.050	.010	.084	.174
33.....	F	do.....	do.....	a 1.700	.005	.030	.050	.010	.082	.177
34.....	A	do.....	do.....	a .550		.045		.010	.008	.063
34.....	B	do.....	do.....	a .800		.045	.020		.008	.073
34.....	C	do.....	do.....	a .650		.045	.020		.008	.073
34.....	D	do.....	do.....	a .600		.015		.010	.024	.049
34.....	E	do.....	do.....	a .650		.015		.023	.011	.049
35.....	A	do.....	do.....	a .750	.050	.065	.032		.045	.192
35.....	B	do.....	do.....	a 1.000	.050	.075	.040		.042	.207
35.....	C	do.....	do.....	a 1.100	.035	.105	.060		.057	.257
35.....	D	do.....	do.....	a 2.000	.035	.120	.060		.067	.282
36.....	A	do.....	do.....	a .650	.034	.071	.030		.049	.184
36.....	B	do.....	do.....	a .900	.027	.130	.050		.060	.267
37.....	A	do.....	do.....	a .700	.038	.010	.040	.010	.053	.151
37.....	B	do.....	do.....	a .650	.033	.078	.038		.053	.202
37.....	C	do.....	do.....	a .675	.028	.075	.035		.055	.193
38.....	A	do.....	do.....	a .910	.030	.233			.085	.348
38.....	B	do.....	do.....	a .970	.050	.133			.085	.313
38.....	C	do.....	do.....	a 1.430	.029	.251			.085	.365
39.....	A	do.....	do.....	a .650	.045	.063	.035		.058	.201
39.....	B	do.....	do.....	a 1.000	.045	.093	.045		.058	.241
39.....	C	do.....	do.....	a .875	.045	.088	.042		.058	.233
40.....	A	do.....	do.....	a .675	.032	.079	.036		.054	.201
40.....	B	do.....	do.....	a .675	.020	.080	.036	.011	.054	.173
40.....	C	do.....	do.....	a .675	.037	.086	.027		.056	.206
41.....	A	do.....	do.....	a 1.050	.032	.191			.043	.266
41.....	B	do.....	do.....	a 2.000	.029	.213			.077	.319

\* Gross price of one dozen pairs sold to jobbers or commission houses.

TABLE 57.—DETAILS OF COST OF DIRECT LABOR, PER DOZEN PAIRS OF HOSE, BY ESTABLISHMENTS AND STYLES—Continued.

Establishments.	Style.	Seamless or full fashioned.	Local-ity.	Gross price of one dozen pairs to retailers.	Cost of direct labor.						Total.
					Bleach- ing or dyeing.	Wind- ing and knitting.	Loop- ing.	Sew- ing.	Finish- ing.		
41.	C	Seamless.	South.	\$2.150	\$0.090	\$0.221				\$0.078	\$0.389
41.	D	do.	do.	1.200	.042	.221				.043	.306
41.	E	do.	do.	1.250	.052	.160				.045	.257
42.	A	do.	East.	a. 625	.015	.090		\$0.050		.065	.220
42.	B	do.	do.	a. 950		.120		.050		.065	.280
42.	C	do.	do.	1.000	.020	.145		.050		.065	.290
42.	D	do.	do.	1.800		.125		.060		.065	.250
43.	A	do.	do.	a. 975	.065	.060		.070	\$0.035	.125	.355
43.	B	do.	do.	a. 1.750	.070	.100		.075	.035	.145	.385
43.	C	do.	do.	a. 3.500	.150	.100		.085	.035	.195	.565
44.	A	do.	do.	1.050	.080	.138		.060		.090	.368
44.	B	do.	do.	.950	.062	.138		.060		.088	.348
44.	C	do.	do.	1.100	.055	.148		.065		.095	.363
44.	D	do.	do.	1.000	.075	.040		.070	.020	.100	.320
44.	E	do.	do.	1.125	.075	.075		.080	.020	.100	.350
44.	F	do.	do.	1.150	.075	.040		.070	.020	.100	.305
45.	A	do.	do.	a. 1.825	.220	.100		.070	.030	.134	.554
45.	B	do.	do.	a. 1.750	.065	.050		.060	.030	.114	.319
45.	C	do.	do.	a. 950	.060	.120		.050		.065	.285
45.	D	do.	do.	a. 850	.050	.120		.050		.062	.280
46.	A	do.	do.	a. 1.850	.090	.220		.060		.095	.465
46.	B	do.	do.	a. 1.550	.050	.170		.070		.100	.390
46.	C	do.	do.	a. 3.400	.110	.170		.070		.100	.450
47.	A	do.	do.	a. 1.850	.150	.150		.060		.105	.465
47.	B	do.	do.	a. 950	.050	.095		.030		.090	.265
47.	C	do.	do.	a. 1.000	.063	.120		.052		.105	.340
48.	A	do.	do.	a. 1.000	.060	.135		.050	.020	.100	.305
48.	B	do.	do.	a. 1.000	.040	.250		.050		.095	.435
48.	C	do.	do.	a. 1.500	.080	.160		.080	.030	.120	.470
48.	D	do.	do.	a. 1.500	.035	.325		.080	.040	.110	.590
48.	E	do.	do.	a. 3.350	.160	.200		.080		.220	.660
48.	F	do.	do.	a. 3.000	.180	.350		.080		.200	.810
49.	A	do.	do.	a. 1.750	.080	.160		.075	.010	.130	.443
49.	B	do.	do.	a. 3.250	.180	.160		.075	.010	.118	.558
49.	C	do.	do.	a. 1.750	.080	.100		.075	.030	.143	.428
49.	D	do.	do.	a. 3.250	.220	.100		.075	.035	.163	.593
50.	A	do.	do.	a. 675	.030	.065		.050	.015	.085	.245
50.	B	do.	do.	a. 950	.030	.175		.050		.095	.350
50.	C	do.	do.	a. 1.550	.090	.205		.050		.095	.440
50.	D	do.	do.	3.250	.100	.120		.090		.150	.480
51.	A	do.	do.	2.050	.075	.183		.080	.010	.115	.463
52.	A	do.	do.	a. 1.500	.061	.155		.080		.167	.403
52.	B	do.	do.	a. 3.500	.120	.175		.080		.230	.605
52.	C	do.	do.	a. 1.000	.104	.100		.060	.018	.138	.420
52.	D	do.	do.	a. 1.850	.073	.060		.080	.025	.218	.456
52.	E	do.	do.	a. 3.500	.118	.090		.080	.030	.236	.584
53.	A	do.	West.	2.100	.050	.145		.070		.045	.310
53.	B	do.	do.	.375	.050	.195		.070		.045	.360
54.	A	do.	do.	1.100	.140	.130		.070		.140	.480
54.	B	do.	do.	2.050	.145	.135		.070		.170	.520
54.	C	do.	do.	2.050	.145	.135		.070		.170	.520
54.	D	do.	do.	4.150	.145	.180		.080		.180	.585
54.	E	do.	do.	4.150	.145	.180		.080		.180	.585
55.	A	do.	do.	2.150	.090	.150		.080		.150	.440
55.	B	do.	do.	2.050	.100	.150		.080		.150	.480
55.	C	do.	do.	2.050	.110	.150		.080		.150	.490
56.	A	do.	do.	a. 1.500	.063	.165		.070		.077	.375
56.	B	do.	do.	a. 1.850	.063	.165		.070		.077	.375
56.	C	do.	do.	a. 1.850	.063	.200		.070		.077	.410
57.	A	do.	do.	a. 3.250	.063	.240		.070		.087	.460
57.	B	do.	do.	2.100	.090	.173		.080		.142	.425
57.	C	do.	do.	2.100	.093	.055		.080	.025	.137	.330
57.	D	do.	do.	2.050	.076	.205		.070		.152	.503
57.	E	do.	do.	2.800	.093	.200		.070	.052	.145	.530
58.	A	do.	do.	1.100	.060	.110		.060		.130	.360
58.	B	do.	do.	2.000	.050	.150		.080		.190	.470
58.	C	do.	do.	4.000	.060	.150		.080		.250	.540
59.	A	do.	do.	2.150	.120	.160		.048		.097	.425
59.	B	do.	do.	2.400	.070	.230		.050		.098	.448
59.	C	do.	do.	2.150	.050	.150		.070		.118	.388
59.	D	do.	do.	2.400	.050	.150		.050		.118	.368
59.	E	do.	do.	4.000	.050	.160		.070		.098	.378
59.	F	do.	do.	2.400	.060	.100		.070		.135	.365
60.	A	do.	do.	4.000	.050	.100		.070		.163	.383
60.	B	do.	do.	2.050	.070	.125		.070		.110	.375
60.	C	do.	do.	2.750	.070	.085		.060	.020	.108	.393
60.	D	do.	do.	4.000	.070	.055		.060	.020	.118	.323
60.	E	do.	do.	6.250	.070	.055		.085	.025	.113	.348
60.	F	do.	do.	2.150	.070	.155		.045		.118	.388

a Gross price of one dozen pairs sold to jobbers or commission houses.

TABLE 57.—DETAILS OF COST OF DIRECT LABOR, PER DOZEN PAIRS OF HOSE, BY ESTABLISHMENTS AND STYLES—Continued.

Establishments.	Style.	Seamless or full fashioned.	Local-ity.	Gross price of one dozen pairs to retailers.	Cost of direct labor.						Total.
					Bleaching or dyeing.	Wind-ing and knitting.	Loop-ing.	Sew-ing.	Finish-ing.		
60.	G	Seamless	West.	\$2.050	\$0.070	\$0.125	\$0.070			\$0.110	\$0.375
61.	A	do.	do.	2.150	.040	.150	.070			.130	.390
61.	B	do.	do.	2.750	.040	.150	.070			.140	.400
61.	C	do.	do.	4.250	.040	.180	.080			.140	.450
61.	D	do.	do.	2.900	.070	.080	.070	\$0.020		.140	.380
61.	E	do.	do.	4.250	.070	.100	.070	.020		.140	.400
61.	F	do.	do.	2.900	.090	.240	.060			.140	.530
61.	G	do.	do.	2.900	.110	.200	.080			.140	.540
62.	A	do.	East.	a. 520	.070	.020			.020	.070	.180
62.	B	do.	do.	a. 625	.055	.040			.020	.080	.195
66.	C	do.	do.	a. 850		.110	.053			.082	.245
66.	D	do.	do.	a. 850		.110	.053			.082	.245
66.	E	do.	do.	a. 850		.110	.053			.082	.245
66.	F	do.	do.	a. 850		.110	.053			.082	.245
67.	G	do.	do.	a. 950		.117	.045			.068	.220
67.	A	do.	do.	a. 950		.117	.045			.068	.220
67.	B	do.	do.	a. 1.000		.117	.050			.069	.236
68.	C	do.	do.	1.000	.040	.125	.060			.325	.390
68.	D	do.	do.	1.000	.035	.135	.060			.310	.390
68.	E	do.	do.	.950	.020	.118	.050			.122	.310
68.	F	do.	do.	1.000	.020	.118	.050			.122	.310
68.	G	do.	do.	1.850	.030	.145	.080			.120	.375
69.	A	do.	do.	a. 1.700	.044	.149	.077			.105	.375
69.	B	do.	do.	1.050	.025	.142	.057			.108	.332
69.	C	do.	do.	a. 1.900	.040	.179	.057			.116	.392
69.	D	do.	do.	a. 1.250	.030	.173	.057			.115	.375
69.	E	do.	do.	a. 1.050	.025	.132	.067			.102	.327
69.	F	do.	do.	a. 2.500	.040	.109	.049			.099	.259
70.	A	do.	do.	a. 1.650	.055	.170	.070			.095	.390
70.	B	do.	do.	a. 1.600	.065	.150	.055			.095	.365
70.	C	do.	do.	a. 1.550	.065	.150	.055			.095	.365
70.	D	do.	do.	a. 1.750	.090	.143	.050			.095	.378
70.	E	do.	do.	a. 1.575	.080	.143	.050			.095	.368
70.	F	do.	do.	a. 1.250	.085	.185	.050			.105	.420
71.	A	do.	do.	a. 1.000	.077	.100	.040			.130	.347
71.	B	do.	do.	a. 1.800	.088	.105	.050			.149	.392
71.	C	do.	do.	a. 875	.052	.106	.045			.111	.314
71.	D	do.	do.	a. 1.750	.030	.111	.060			.161	.362
71.	E	do.	do.	a. 1.900	.150	.155	.090			.126	.491
71.	F	do.	do.	a. 1.600	.127	.083	.060			.134	.374
71.	G	Full fashioned	do.	a. 3.750		.488	.053		.060	.141	.706
71.	H	do.	do.	a. 3.625		.452	.053		.060	.134	.674
71.	I	do.	do.	a. 3.600	.029	.557	.058	.080		.174	.898
71.	J	do.	do.	a. 1.800		.470	.053	.060		.155	.738
71.	K	do.	do.	a. 3.375	.030	.450	.053	.038		.137	.708
71.	L	do.	do.	a. 3.375	.015	.450	.053	.038		.126	.682
72.	A	Seamless	do.	a. 1.250	.040	.080	.050	.018		.089	.281
72.	B	do.	do.	2.150	.071	.247	.050			.057	.425
72.	C	do.	do.	2.250	.083	.242	.050			.049	.424
72.	D	do.	do.	2.750	.064	.252	.050			.087	.453
72.	E	do.	do.	4.250	.089	.042	.070	.045		.102	.348
72.	F	do.	do.	2.150	.061	.213	.045			.077	.297
72.	G	do.	do.	1.400	.108	.163	.045			.077	.393
72.	H	do.	do.	2.100	.048	.209	.050			.082	.389
72.	I	do.	do.	2.250	.063	.239	.050			.082	.434
72.	J	do.	do.	1.900	.040	.178	.050			.077	.345
72.	K	do.	do.	2.100	.059	.209	.050			.077	.395
72.	L	do.	do.	.875		.093	.033			.017	.143
72.	M	do.	do.	1.100	.074	.200	.040			.049	.283
72.	N	do.	do.	2.100	.045	.181	.050			.075	.305
72.	O	do.	do.	2.150	.080	.114	.040			.072	.206
72.	P	do.	do.	2.150	.044	.197	.070			.100	.411
72.	Q	do.	do.	2.250	.056	.155	.050			.116	.377
72.	R	do.	do.	2.250	.068	.105	.040			.063	.276
73.	A	do.	do.	2.050	.074	.140	.070			.106	.393
73.	B	do.	do.	1.100	.052	.120	.051			.102	.325
73.	C	do.	do.	2.000	.062	.164	.094			.119	.439
73.	D	do.	do.	2.150	.071	.164	.089			.092	.416
73.	E	do.	do.	2.150	.072	.065	.086	.030		.121	.374
73.	F	Full fashioned	do.	4.250	.074	.595	.084	.075		.198	.026
73.	G	do.	do.	4.250		.492	.078	.075		.187	.832
73.	H	do.	do.	2.150	.096	.427	.074	.065		.175	.837
73.	I	Seamless	do.	2.000	.12	.052	.047			.119	.457
73.	J	do.	do.	1.100	.074	.137	.047			.065	.265
73.	K	do.	do.	2.150	.092	.220	.060			.095	.467
73.	L	do.	do.	1.250	.101	.137	.047			.089	.374
73.	M	do.	do.	2.000	.153	.137	.047			.095	.432



## CHAPTER IV.

### MANUFACTURING AND SELLING.

#### MANUFACTURING CONDITIONS.

When hosiery manufacturers who complained that the industry was not in a prosperous condition were questioned as to the cause, many of them placed the blame on the retailers. Years ago the retail prices of hosiery became fixed at certain amounts, usually 12½ cents, 25 cents, 50 cents, 75 cents, \$1, \$1.50, and \$2 per pair. The amount of hosiery retailed at other figures, except in reduction sales, is small. The public has become educated to these certain fixed prices, and if the first retail prices are different, there are suspicions that the goods are seconds or are damaged in some way.

Manufacturers allege that the cost of retail distribution has greatly increased during recent years, especially the expenses for clerk hire, rent, store equipment, advertising, and delivery service. His expenses being larger, the retailer, to make the same percentage of profit as formerly, must buy his goods cheaper. As the standard prices of hosiery prevent him from retailing certain grades at higher prices, he forces the manufacturer to sell to him cheaper. Often this is done by getting a sample and a bid on an order from one manufacturer, and submitting the sample to other manufacturers for bids, the lowest, of course, being accepted. In this way the manufacturers are brought into severe competition with one another, and it is most severe when they are dealing with a very large jobber or retailer or with a chain of connected stores. In recent years there has been a tendency in the direction of combinations of retail stores in the same city or in different cities.

The hosiery manufacturer who is forced by trade conditions to accept less for his product has nobody to whom he can transfer the loss. On the contrary, his expenses have increased. During the last few years before the war in Europe began, the average price of cotton increased several cents a pound, and cotton yarns increased proportionately. The manufacturer must bear the entire burden of the increased cost of the raw material. The demands of workers have been more and more exacting, and wages have increased, while the number of working hours has been reduced. The laws against children working have become more rigid and have been more strictly enforced. In many States the manufacturer has had to spend more money to comply with the requirements regarding sanitation and safety devices. In many States, also, workmen's compensation acts have been passed, which amount to a considerable tax on manufacturers. In an efficient plant new machinery must be constantly purchased, and the demand for finer goods has made the purchase of new machinery more necessary. During the last few years, therefore, hosiery manufacturers have been in an unfortunate position, with their cost of manufacturing increased and the prices at which they must sell decreased. This condition has led to ruinous competition among them.

Many manufacturers are discouraged by these conditions and do not know how to remedy them. Some of them say that the only way to protect themselves against the jobbers and retailers that force manufacturers to come to their own terms is for the manufacturers to combine and establish a centrally controlled selling agency, but it is admitted that this plan is impracticable because it would conflict with Federal antitrust laws.

The National Association of Hosiery and Underwear Manufacturers, with headquarters at Philadelphia, Pa., is composed largely of hosiery manufacturers. It holds annual conventions and discusses matters relating to manufacturing and trading conditions in the industry. But no combination, or at least no successful combination, of hosiery manufacturers to fix prices has ever been made, and, as before stated, the competition between manufacturers is severe. The impression that one receives in talking with hosiery manufacturers is that they are very distrustful of one another.

The condition in the industry caused by the manufacturer having increased expenses and not being able to contend against falling prices paid by his customers, the jobbers and retailers, has caused him in some cases to make hosiery in lighter weights and reduced lengths, and also to knit the hosiery more loosely, thus saving the difference in the cost of raw material. If wool is used, a smaller proportion of it is used. The result is that the consumer secures an inferior article without any reduction in the price that he pays to the retailer.

There is a slight tendency toward larger factories in the hosiery and knit-goods industries. As shown by Table 2, on page 12, of this report, in 1899 there were 1,006 such factories with 83,691 employees, an average of 83 employees per establishment, while 10 years later there were 1,374 factories with 129,275 employees, an average of 94 employees. One thing that limits the growth of factories is the scarcity of labor. When all the suitable labor near a factory has been utilized, the establishment, if it is enlarged, must start other factories or branches in other localities.

#### LARGE AND SMALL FACTORIES CONTRASTED.

There is a difference of opinion as to whether large or small factories can be managed more successfully. Many manufacturers were interviewed on this subject. Some of them said that competition is so strong on staple goods that a big production is necessary to make a profit. Some said that system, efficiency, division of labor, and good labor conditions can best be developed in the large factory. One said that the great success of the knitting industry in Germany during recent years was due to the fact that very large factories had developed there. Another said:

The tendency in the business is toward large factories. A large plant on account of buying in large quantities can always beat its small competitor in prices, and on account of greater production can afford to take a narrower margin of profit. A large corporation also has an advantage over the smaller concerns in selling. The large factory with its greater capital is enabled to do more advertising and can do its own selling, while the smaller companies are dependent on agents and jobbers to dispose of their production.

Some manufacturers contend that the small factory, which is of necessity under closer personal supervision, can be operated with a greater proportion of profit than the larger factory. One manufacturer expressed this opinion:

The tendency in knitting mills is toward larger factories, both by the natural growth of the smaller ones and by consolidation. The advantages of the larger factories are

problematical. The larger output to a certain extent reduces the fixed overhead charges; but the larger factories are at a disadvantage from the fact that they must to a great extent depend on hired labor to do the work that in smaller plants is done by the owners. The personal equation, the intense interest of the owner who reaps the sole benefit of success in his plant, is lost in too large an institution.

The data secured from establishments during this investigation were grouped according to the products of the establishments, and to some extent according to their locations. The data in each group were arranged in the order of the net sales of the establishments, the one with the smallest sales first and the one with the largest sales last. An examination of Table 25, page 56, showing the percentages of profit on net sales by establishments and groups, shows that there were no decided differences in the percentages of profit between the smaller and the larger establishments for each group.

The fact that the crude cost-finding systems which are so prevalent in the hosiery industry lead to unintelligent price making and cut-throat competition is discussed in sections of the report headed "Inadequate cost-finding methods" and "Simplified cost accounting." A manufacturer who was interviewed said that it was not so much foreign competition that was hurting the hosiery business, but rather fierce domestic competition. The seamless hosiery business is peculiar in the fact that it does not require a great outlay of capital to be able to undertake it. Any person with a capital of \$500 or \$1,000 can buy a few machines by making a small cash payment, rent a room, and start a seamless-hosiery plant. Hundreds of such plants have sprung up all over the country in recent years and of course this has had its effect upon the business.

Table 58 shows the number of new hosiery and other knit-goods mills which went into operation in 1914, according to Davidson's Textile Bluebook, 1914-15, pages 43 to 47.

TABLE 58.—HOSIERY AND KNIT-GOODS MILLS WHICH WENT INTO OPERATION IN 1914.

States.	Hosiery.	Underwear.	Sweaters and bathing suits.	Ties, etc.	Gloves.
Alabama.....	1				
California.....	1		2		
Connecticut.....			1		
Georgia.....	2				
Illinois.....	1	2			
Indiana.....			1		
Kentucky.....	1				
Louisiana.....			1		
Maine.....	2				
Maryland.....		1			
Massachusetts.....	3			1	
Michigan.....	1		1		1
Minnesota.....	2				
New Hampshire.....					1
New Jersey.....	5		9	3	
New York.....	3	5	47	3	2
North Carolina.....	18				
Ohio.....		1	2		
Oklahoma.....	1				
Oregon.....					
Pennsylvania.....	42	13	7	3	
Rhode Island.....	1				
South Carolina.....	3				
Tennessee.....	5	1			
Utah.....	1				
Vermont.....	1				
West Virginia.....			1		
Wisconsin.....			3		
Total.....	94	23	78	10	4

It will be seen that during 1914, 94 new hosiery mills went into operation—42 of them in Pennsylvania and 18 in North Carolina. These mills were large enough to attract attention, but there is no way even to estimate the number of small producers, plants with anywhere from 10 to 25 machines, which have started in business during the last two or three years. It was said that a vast number of these plants were started by men who had worked in mills and were more or less familiar with the manufacture of seamless hosiery but had no other business training. They could turn out a finished product, but were utterly unfamiliar with buying or selling and other business conditions which are so vital to any successfully conducted manufacturing enterprise. Their methods of cost accounting are poor and inaccurate, and frequently they will sell an article at a loss without knowing it. It was stated that these small manufacturers were greatly increasing competition, with small gain to themselves.

#### EFFICIENCY NECESSARY FOR SUCCESS.

In former years, when competition was less keen, many concerns of this description, which started on a very limited capital, were successful. At that time profits were sufficient to stand the enormous drain due to cancellations, inefficient methods, etc. At the present time, when profits have been reduced, due to sharp competition resulting from the great expansion of the business, there is absolute need of putting manufacturing establishments on an economical and efficient basis. Formerly a badly located, poorly managed, inefficient plant could make a profit. Now all is changed, and the manufacturer of seamless hosiery in order to attain success must have a mill equipped with up-to-date machinery, managed in an economical and scientific manner, with a system of cost accounting which will enable him at all times to know the true condition of his business and the actual cost of every article produced.

As the styles and weight of hosiery have changed greatly in recent years, he must also keep abreast of the times in regard to these changes or he will have difficulty in marketing his product at a profit.

Most of the hosiery made of cotton is manufactured in factories which buy the yarns they use. Many manufacturers allege that it is cheaper to buy than to spin yarns, especially the grades that are spun in the South, where the labor cost is lower than in the North. Most of the hosiery made of wool or of wool and cotton mixed is manufactured in factories which spin their own woolen or worsted yarns. These factories, however, usually buy the cotton yarn they use. Mixtures of cotton and wool, with or without some noils or wool shoddy, are called merino. The principal reason why manufacturers spin their own merino yarns is that they may vary the proportion of wool used in the yarn according to the market price of wool, which is subject to great fluctuation. If a certain grade of wool is selling at 40 cents a pound one month and the next month the price is increased to 50 cents, the manufacturer is almost sure to use more cotton, noils, waste, or shoddy in the yarn mixture.

Buying wool, cotton, or yarns is a form of speculation that is unavoidable in the business. When wool is low, manufacturers buy in large quantities, probably a year's supply; when it is high, they buy only according to their immediate needs. A manufacturer

that uses cotton or cotton yarns usually buys a year's supply in the fall. He does this, because, as a rule, the price of cotton is cheaper in the fall than at any other season of the year, and also because he wishes to be sure that he will have a sufficient supply on hand to keep his factory running steadily. If cotton or yarn is high in the fall, the manufacturer usually buys in small quantities.

Cotton yarns spun on ring frames are wound on cones. Mule-spun yarns are wound on cops. If yarns are to be dyed, they are reeled into skeins and after dyeing are rewound on cones.

Mills that sell yarn allow 2 per cent for tare on the cones and the paper used in the packing cases. On some kinds of cones the tare allowance is only 1 per cent. Some manufacturers who buy yarns claim that the tare allowance is not enough, and that it should be 4 per cent to equal the weight of the paper and cones. At the annual convention of the National Association of Hosiery and Underwear Manufacturers held in Philadelphia May 4-6, 1915, the board of directors made a report which said:

Considerable progress has been made in promoting the net-weight policy in the sales and purchases of yarns, by which the actual buyer is spared the cost of wrapping at the price of yarn. Many manufacturers, however, have yet to realize the importance of net-weight buying.

One reason why some manufacturers have not been prosperous during recent years is that they have been trying to change from selling their product to jobbers to selling it to retailers. The establishment of a trade with retailers is an expensive process. Much more money must be spent for salaries, commissions, and expenses of salesmen, and more for the enlarged credit department of the factory. There is also a liability of greater losses from bad debts. Moreover, the requirements of retailers often force the manufacturer dealing with them direct to turn out too great a variety of styles.

#### INADEQUATE COST-FINDING METHODS.

Adequate cost finding is one of the greatest needs in many lines of manufacturing. Whole industries have suffered from the general lack of intelligent costing. The unintelligent or unprogressive manufacturer often makes prices to undersell his competitors, not really knowing whether he is making or losing money on the goods he sells, but in some cases thinking he is making money when he is actually losing. So much business is done in this cutthroat manner that even establishments which have installed elaborate cost-finding systems have been forced to abandon them and revert to the ruinous policy of meeting the competition of reckless business rivals, regardless of consequence. They do this to hold their trade, hoping that profits on some lines will compensate for losses on other lines. The result is that many lines of the manufacturing business are cut to pieces. The national manufacturers' associations could do no greater service for their members than to urge them to adopt adequate cost-finding systems.

The hosiery industry in the United States is one which suffers particularly from the lack of an adequate cost-finding system to determine the actual costs of certain grades of the production. There is a variety of methods of calculating the charge for general expense, and many of them are very crude. Some manufacturers

that have adopted a really scientific cost-finding system have learned that they could not sell certain grades of goods at prices based on costs found by the system, because competitors that calculated costs by an imperfect method would undersell them.

Most manufacturers of hosiery and knit goods admit that the lack of an accurate and uniform method of cost finding is a drawback which seriously interferes with the prosperity of the industry. The National Association of Hosiery and Underwear Manufacturers has considered the matter for years but has been unable to agree on a standard of distributing overhead expense. The following is quoted from the proceedings of the annual convention of the association held in Philadelphia, Pa., May 12-14, 1914: <sup>a</sup>

Clyde E. Murray, of the Harrison-Murray Association, New York City, then read his address on "Operating costs and economies," which was followed with close attention. At the conclusion of this address the president remarked that the committee on cost accounting, which was appointed last year, has been carefully considering this subject, but that it has not arrived at any definite conclusion as to the best methods of cost accounting, and asked that the committee be continued.

The following also is quoted from the report of the board of directors to the convention:

The matter of educational work along the lines of cost methods has been a question of vital interest to the association and to individual members ever since the association was organized, and we presume that this topic will always remain a vital issue in our work. Repeated efforts have been made to formulate plans that would enable knitting manufacturers to adopt practical methods for the accurate costing of their goods, but as yet no generally accepted system has been agreed upon. Your board of directors have had frequent conferences during the year with cost and efficiency experts, who have made investigations among knitting manufacturers with the idea of developing plans for assisting the manufacturers on this vital question. We hope some tangible plan may be adopted that will prove effective in the object sought.<sup>a</sup>

At the annual convention held in Philadelphia May 4-6, 1915, the board of directors made a report but did not report on the subject of cost-finding, and the subject was not considered by the convention.

The following paper on "Operating costs and economies," by Clyde E. Murray, of the Harrison-Murray Association, New York City, read by him to the convention of 1914, shows how much at sea manufacturers of hosiery and knit goods are with regard to cost accounting, and emphasizes the importance to the industry of the adoption of a uniform system:

Manufacturers to-day find themselves between the devil and the deep sea—between the "devil" of constantly increasing cost for materials and labor, and the "deep sea" of constantly increasing competition.

There is a certain form of competition to which the manufacturer can not well object, to that of the man who knows exactly what his goods cost and whose prices, if low, reflect advantages actually secured through volume or by reason of highly efficient methods of production. The form of competition which is most dreaded, however, is that of the man who, having no proper knowledge of cost, sets prices which preclude the possibility of there being an adequate profit in the business for anyone.

The natural accumulative effect of this unintelligent competition was really the prime factor in causing the formation of associations in various lines, with the consequent agreements relative to sales prices. Recent legislation, however, has tabooed these selling agreements, and manufacturers find themselves contending with the same old discouraging competition. Despite this fact this legislation has been a beneficial move in that it has forced manufacturers to approach the problem from an entirely different angle, namely, uniform cost-finding methods. No matter how many selling agreements might be in force, the evil of manufacturing some portion of the product at a loss would still be in evidence without an exact knowledge of final costs. Absence of this knowledge forces a manufacturer to govern his selling price

<sup>a</sup> Textile Manufacturers Journal, May 16, 1914, p. 35.



by that of his competitor. His competitor is just as liable to be producing at a loss, in fact more so, as the natural law of competition has a tendency to lower selling prices from year to year, due to the sending out of leaders with an attractive price attached, and the almost utter impossibility of getting that price back to its original figure.

That is true in your line as well as many others. A number of industries, however, have awakened to the fact that it is business suicide to continue as they have been doing, and through the activity of their association officers have adopted a corrective measure in the shape of uniform-cost methods. Wherever this measure has been adopted the desired results have been immediately and almost automatically attained. No manufacturer will continue to produce a line of goods in the face of conclusive proof that he is exchanging a dollar for 80 or 90 cents.

The manufacturer of knit goods to-day faces the combination of advancing costs on material, labor, and expense, together with the keenest sort of competition on the selling end of the business. Under such circumstances profits would undoubtedly be sufficiently reduced if all competition were based on an exact knowledge of costs. In the absence of such knowledge it is not surprising that conditions are far from desirable.

If we were able to make a canvass of the entire industry we would find a large number of manufacturers who would cheerfully admit their ignorance of this important matter and who would at the same time defend themselves by claiming that the clerical cost to be incurred in determining manufacturing costs would be in itself so great as to be prohibitive. We, in turn, cheerfully admit that cost finding, like any other good thing, can be and is carried too far. But for every manufacturer who goes too far into the matter there are hundreds who do not go far enough. This is notably the case in the knit-goods industry.

This fear of overelaboration in details and consequent excess of clerical cost is largely responsible for the conditions which exist in the industry along this line. Yet, despite the fact that there are refinements of cost keeping, which are profitless, there is a happy medium of cost knowledge which all who expect to survive must in time acquire.

We accept the pound and the yard as units of weight and measure, and yet as we use them in business they give us results only within a reasonable degree of precision. In the same way it is possible to devise for any business a method of determining cost, which, while free from hair-splitting distinctions, will give wholly acceptable results with clerical economy. \* \* \*

This question of costs is not one of merely academic interest. It is, as a little thought will show, a matter of real concern, for if costs are to be utilized to the greatest extent as guides to executive judgment, the cost of each article must be calculated so accurately as to reflect its individual status as a profit earner.

From the standpoint of the individual manufacturer the adoption of uniform cost methods merely marks the primary step in efficiency. Unquestionably uniform costs mean the survival of the fit, or, in other words, the survival of the efficient. With a logical basis, however, on which to operate and the knowledge that if a competitor is underselling, it is because he is a better executive and has a more efficient mill, the manufacturer finds himself with something tangible to work upon. It then behooves him to study his own costs and determine just where it is lacking.<sup>a</sup>

In this investigation reports were secured from many establishments having different cost-finding systems, and in compiling the statistics it was necessary, of course, that the overhead charges on all units should be computed on a uniform basis, in order that the costs of units should be comparable.

The cost of materials and the cost of direct labor are as stated by the manufacturer that furnished information, and doubtless are as correct as they could be given. The indirect labor and factory expense were computed on the basis of the direct labor to which they are closely related. But the cost of administration and the cost to sell were computed on the basis of the net sales, which is a definite sum and to which they are related. This method is explained under "The dual system," on page 156 of this report. The overhead for indirect labor and for factory expense was computed on the basis of the direct labor, and the overhead for administrative and selling cost was computed on the selling price.

<sup>a</sup> Textile Manufacturers Journal, May 16, 1914, pp. 57-58.

#### SIMPLIFIED COST ACCOUNTING.<sup>a</sup>

The object of conducting business is to secure profits. Nothing that relates to manufacturing is of more importance than "costing." Efficiency rules may be applied in an excellently equipped factory, but, unless the proprietor has an adequate cost-finding system, he is liable to suffer financial loss. If he does not know, with a close degree of accuracy, what the different articles he manufactures have cost, and at what prices he can afford to sell them, he is not in a position to meet competition intelligently, and he invites business disaster. Under conditions as they existed formerly, he may have been satisfied with the profit earned on his whole line of products, as shown by his profit and loss statement, but in these days there is the keenest competition in almost every line of manufacturing, and the survival of the fittest is the inexorable law of the business world. Even if a manufacturer is satisfied with his yearly profit which his balance sheet shows, he should know on which particular products he is making the most profit, and on which he is making only a narrow margin of profit or losing money. Intelligent costing would enable him to distinguish between the profits on different products, to discontinue the manufacture of products sold at a loss, to limit the sales of products on a small margin of profit, and to give more attention to the manufacture and marketing of products on which the largest profits are realized.

Cost accounting is especially important for manufacturers with small or comparatively small capital, in order that they may meet the severe competition of those who manufacture on an extensive scale. As a rule, the large manufacturers have, not only the most improved machinery and most efficient methods of production, but also very accurate cost-finding systems.

The comparatively small manufacturers have not been so slow in equipping their factories with up-to-date machinery and in adopting efficiency rules as they have been in planning a system by which they could know the actual costs of their different units of production. Any investigation of this matter which may be made will show that an amazing number of American manufacturers have practically no costing system or only the crudest sorts of systems.

Most manufacturers know the cost of materials and the direct labor cost for each unit of production, but do not intelligently distribute the general expense or "burden," or, as it is commonly termed, the "overhead." Many of them add to the material and labor cost for each unit what they think, judging from past experience, the charge for overhead should be and fix prices accordingly; but if they manufacture any variety of products such guesswork will surely lead to a diminution of profit or to financial loss.

In recent years the profession of cost accounting has developed, but the small manufacturers, constituting much the larger number, have been much more backward than the large producers in adopting the methods of this branch of efficiency. They complain of the keenness of competition, yet do not avail themselves of a costing system which would show on which articles they could meet competition and on which articles they could not. Perhaps the principal reason for this

<sup>a</sup> This section appeared in the *Annals of the American Academy of Political and Social Science*, September, 1915, pp. 165-173.



backwardness on the part of the small manufacturers is that they think they can not afford to pay the fees which are charged by efficiency experts for installing cost-accounting systems. A simple, inexpensive, and yet accurate costing system is one of the crying needs of the small manufacturers to-day. Regardless of the expense of the installation of a scientific system by professional cost accountants, some of the systems are so complicated as to preclude their general use, because they are beyond the grasp of the ordinary small manufacturer.

Many small manufacturers employ as bookkeepers men, and often girls, whose accounting experience is so limited that they can scarcely prepare a profit-and-loss statement or an annual balance sheet and who would be utterly unable to figure out an elaborate system of costing. And yet simple practicable systems can be adopted which come within the comprehension of inexperienced bookkeepers and, by means of which, a satisfactory knowledge of the costs of different products can be obtained.

There are two elements of cost—raw materials and direct labor—which can be ascertained for different units with close accuracy, and these are usually the largest elements. Almost any manufacturer knows just how much raw material is used in any unit and knows the cost of the direct labor. If he pays his employees on the piece-price basis, he knows the cost of the direct labor per unit exactly. If the direct labor, or part of it, is paid on the time-rate basis, he generally knows, from records of production, the average time required by his employees to produce a certain unit. Knowing the cost for materials and for direct labor, the problem is to find the proper burden for general expenses to apportion to each different unit. This is the great stumbling block in the way of an incredible number of manufacturers.

There are three systems of costing, all of them simple, which are more or less used. They may be designated the "quantity" method, the "direct-labor" method, and the "prime-cost" method.

#### THE QUANTITY METHOD.

By this method the total general expense during the preceding business period—that is, all expense except for raw materials and direct labor—is divided by the number of units produced, and the quotient is added to the cost of materials and direct labor for each unit. This may be expressed as follows:

$$\frac{\text{Burden, last period}}{\text{Number of units produced}} = \text{Amount of burden per unit.}$$

If, for instance, during the last period the entire cost of manufacturing and selling were \$100,000, the raw materials cost \$50,000 and the direct labor \$30,000, the burden amounted to \$20,000. If, therefore, 10,000 units were produced during that period, the burden for each would be \$2. Of course the amount for raw materials used in the computation must be the amount actually used during the last business period and not the amount purchased, which may be more or less, and this requires that there should be inventories of raw materials at the beginning and end of the period. The account for raw materials—that is, materials used in the unit—should be kept distinct from factory supplies.

This method of costing is the simplest of all methods, and where only one kind of goods is manufactured it is the most accurate of all systems. A concern that manufactures only one kind of typewriter, for instance, would not need a more perfect system; but obviously this method is very defective if applied in a factory where goods of varying values are produced.

#### THE DIRECT-LABOR METHOD.

By this method the burden charge is made on the basis of the cost of the direct labor for the unit, in the proportion of the total cost of direct labor to the total amount of burden during the preceding period. This may be expressed as follows:

$$\frac{\text{Burden, last period}}{\text{Direct-labor pay roll}} = \text{Per cent of burden per unit.}$$

If during the last period the total direct-labor cost amounted to \$30,000 and the burden to \$20,000, a charge of 66.67 per cent of the direct-labor cost of the unit should be made for burden—that is, should be added to the cost of materials and direct labor for the unit.

Where units are produced which differ in labor cost, this method is much more accurate than the quantity method, but it is defective where raw materials of different values are used in different units, for the reason that under it the more expensive grades of goods would not carry their proper proportion of burden.

#### THE PRIME-COST METHOD.

By prime cost is meant the sum of the cost of raw materials and of direct labor. By this method the burden charge is made on the basis of the sum of the cost of raw materials and direct labor for the unit, in the proportion of the total cost of raw materials and direct labor to the total amount of burden during the preceding period. This may be expressed as follows:

$$\frac{\text{Burden, last period}}{\text{Raw materials plus direct-labor pay roll}} = \text{Per cent of burden per unit.}$$

If during the last period the cost of raw materials amounted to \$50,000, the cost of direct labor to \$30,000, a total of \$80,000, and the burden amounted to \$20,000, a charge of 25 per cent (\$20,000 ÷ \$80,000) of the prime cost of the unit would be made for the burden—that is, should be added to the prime cost.

This method provides for the distribution of the burden on the unit much more accurately than the quantity method, where materials of different values are used in different units, or where more labor is employed on some units than on others; and this method is more accurate than the direct-labor method, where materials of different values are used. In costing by any method a charge should be made against the cost of the unit to cover the average loss from waste and seconds.

Any of the three methods which have been described are easy of application even by clerks who have little accounting experience. Another method is, however, recommended as more accurate and nearly as simple. For want of a better designation, it may be termed the "dual method."

## THE DUAL METHOD.

The prime cost method is accurate for computing the burden on units which vary in the cost of materials and the cost of labor only when during the last business period the value of the products equaled the amount of the net sales. There would be an inaccuracy if the net sales amounted to more or less than the production, because the burden for the cost to sell should be computed on the amount of the net sales and not on the production.

By the dual method the ratio of burden for the unit is computed on the prime cost, during the preceding period, for indirect labor and for factory expense, because these portions of the burden are related to the amount of the production, but the selling expense is computed not on the amount of production but on the amount of the net sales. The ratio of burden for administrative expense is also computed on the amount of net sales as the base, because administrative expense is perhaps more nearly related to the amount of net sales than to the value of the production, though this may differ in different industries.

If, for example, the expenses during the last period were \$50,000 for raw materials, \$30,000 for direct labor, \$4,000 for indirect labor, \$3,000 for factory expense, \$6,000 for administrative expense, and \$7,000 for selling expense, making a total of \$100,000, but if the net sales amounted to \$110,000, the percentage of burden for the unit would be computed as shown in the following illustration:

Expenses, last period.		Per cent of burden for unit.
Raw materials.....	\$50,000	
Direct labor.....	30,000	
Prime cost.....	80,000	
Indirect labor.....	4,000	5.00 (\$4,000÷\$80,000)
Factory expense.....	3,000	3.75 (\$3,000÷\$80,000)
Administrative expense.....	6,000	5.45 (\$6,000÷\$110,000)
Selling expense.....	7,000	6.36 (\$7,000÷\$110,000)
Total.....	100,000	
Net sales.....	110,000	

These percentages are used to find the burden for a unit which is intended to be sold at \$10, for instance, and the cost of which for raw materials \$4.25 and for direct labor \$2.55, as illustrated below:

Raw materials.....	\$4.25	
Direct labor.....	2.55	
Prime cost.....	6.80	
Indirect labor.....	.34	(5 per cent of \$6.80)
Factory expense.....	.255	(3.75 per cent of \$6.80)
Administrative expense.....	.545	(5.45 per cent of \$10)
Selling expense.....	.636	(6.36 per cent of \$10)
Waste.....	.043	(e. g., 1 per cent of \$4.25)
Seconds.....	.068	(e. g., 1 per cent of \$6.80)
Total cost.....	8.69	
Profit.....	1.31	(13.1 per cent of \$10)
Selling price.....	10.00	

As a matter of fact most goods are manufactured to sell at certain prices, which are determined in advance, and if the specification for raw material and for labor are found to be too high to allow a fair profit at the determined price cheaper material or less labor is used.

The dual method may be varied by basing the percentage of burden for indirect labor and factory expense on the direct labor cost, instead of the prime cost, and it is claimed that for some industries, where the materials used differ but little in cost per unit, this modified method is more satisfactory.

In order to compute the burden by the dual method, accounts should be kept for the foregoing mentioned items, and they may be subdivided as appears below:

Raw materials.	Cost of administration:
Direct labor:	Salaries of officials, not chargeable to indirect labor or cost to sell.
Wages of all employees in manufacturing occupations.	Salaries of general office force and auditor.
Paid to contractors.	Rent of general office.
Paid to home workers.	Office supplies, stationery, postage, telegrams, telephones.
Total direct labor.	Insurance—other kinds than fire.
Indirect labor:	Expense of collection and legal service.
Salaries of officials, chargeable to manufacturing.	Bad debts.
Wages of factory superintendent and foremen.	Corporation tax.
Wages of designers.	Other administrative expense.
Wages of employees in sample department.	Total cost of administration.
Wages of other general help—machinist, clerks in factory, (not general office), floor boys and girls, etc. (not including engineer and fireman).	Cost to sell:
Total indirect labor.	Salaries of officials, chargeable to sales department.
Factory expense:	Salaries, commissions, traveling and general expense of salesmen.
Rent of space used for manufacturing and shipping departments.	Wages of other employees in sales department.
Power, heat (or fuel and wages of engineer and fireman), light, and water.	Rent of showroom.
Repairs on equipment.	Packing materials.
Depreciation of equipment.	Cartage and freight outward.
Fire insurance.	Advertising.
Workmen's compensation or employers' liability.	Other selling expense.
Welfare work.	Total selling expense.
State, county, township, and municipal taxes.	Waste and seconds:
Other factory expense.	Loss from waste.
Total factory expense.	Loss from seconds.
	Total.

Such accounts can be kept very easily if a specially ruled book is used. Some of the items under factory expense might not improperly be entered under cost of administration, their placement being a matter of opinion, but as these items are usually small, the result in computing the burden on a unit would be little if any affected by a transfer of them from one account to another.

In computing the proportion of burden for the unit on the basis of production and net sales during the preceding business period, the results would be more accurate if the profit and loss statement were made semiannually, instead of annually, and still more accurate if such a statement were made quarterly. In making computations by any method it should be borne in mind that the cost of materials and direct labor, while usually the largest elements of cost, are those which are most liable to fluctuation, and in calculating the burden on the basis of the last period the differences in the cost of materials and direct labor at that time and at the time the computation is made should be taken into consideration.

When a manufacturer gets out new styles he must be particularly careful in costing if all or any of the direct labor is paid on the time-rate basis. In making up samples for salesmen to take out on the road he should make time studies of the several direct labor operations, to ascertain as nearly as possible the direct labor cost per unit. When the goods to fill the first orders received are manufactured, he should check up his first computation by the cost to manufacture in quantities, and if there is a difference he should adjust the selling price per unit accordingly. If it should happen that his price for goods of a certain style, as given to the salesmen, is too low to afford a profit, the earlier he checks up his first calculation of the cost for that style the less money he will lose.

While all of the methods of costing which have been described are comparatively simple and inexpensive, and while for most factories one of these methods would be found entirely practicable and satisfactory, it is not claimed that for a highly organized factory, with many departments, any of these methods would be as accurate as one which would be adapted to the particular needs of the plant, and which might be devised by cost accounting experts after a complete, careful study of the factory conditions.

In a highly organized establishment the departmental method of apportioning burden should be adopted. Certain burden charges should be made against the whole production of the factory, certain charges against the production of particular departments only, and other charges in part against the production of the whole factory and in part against the production of particular departments. If a cotton mill, for instance, sells both yarn and cloth, the factory expense for the weave room or for the cost of indirect labor in that room should not be made a part of the burden on the product of the spinning room. In a printing plant the product that is printed only should not be charged with the expense for the bindery department.

#### SELLING METHODS.

Formerly manufacturers of hosiery sold their entire product to jobbing houses and at the present time the greater part of the output in the United States is still distributed through that channel. However, manufacturers are gradually getting away from this method of distribution, and each year more concerns are selling direct to the retail trade. This is particularly true in the West, and manufacturers in that section are selling the greater part of their product to retailers. In the East and South this condition is not nearly so prevalent, and producers of hosiery still depend mainly on the jobber or commission house as a means of distribution.

The cost of selling to the retail trade is very high as compared with the cost of selling to jobbers, and a manufacturer who has been in the habit of selling to jobbers will consider a long time before changing his selling method on account of the greater expense involved. It takes several years to build up a satisfactory trade with retailers, and during these years the manufacturer must expect small profits. It is necessary to maintain an extensive selling organization and credit system.

Further, in order successfully to reach the retailers the manufacturer should advertise extensively, and this entails a heavy expense. These increased costs prevent small manufacturers of limited capital from attempting to seek the retail trade, and the larger concerns, particularly in the East, which have for years been selling to jobbers, hesitate to revolutionize their entire business by starting a new method of distribution.

#### BRANDED HOSIERY.

About 20 years ago a large Chicago retail store introduced the idea of branding their goods, and recently, since advertising has become so important a factor in selling, many jobbers have adopted trade-marks, which they advertise not only to the trade, but to the general public as well. One of the largest jobbing houses in the United States has its hosiery made in about 20 different factories and requires them to put its trade-mark on all these goods. The buying public is supposedly buying a standard product, but stockings made in different factories differ in quality. This method necessarily results in the manufacturer's identity being lost. He will not advertise, for he can not put his trade-mark on the goods.

The branding of hosiery has resulted in a material change in selling methods. Large manufacturers are gradually giving up selling to jobbers and are devoting their attention to selling to the retail trade exclusively. By selling to retailers they can advertise their own trade-marks and the public can be benefited by being able to buy standardized products. The public will be benefited inasmuch as the manufacturer's obligations under such a selling system will not end with the selling of the goods to the jobber. A brand being well known means that if the hosiery does not give satisfactory wear the manufacturer gets the blame and not the retailer. Therefore it is to the interest of the manufacturer who turns out branded hosiery to make his product conform to as high a standard as possible. Further, the retailer is benefited, for if the customer gets satisfactory service he will remember the brand and will return as a regular customer, not only on hosiery, but on other lines as well.

In an address delivered before the annual convention of the National Association of Hosiery and Underwear Manufacturers, held in Philadelphia, Pa., May 4-6, 1915, Mr. Charles Coolidge Parlin, manager of the division of commercial research of the Curtis Publishing Co., had the following to say in regard to branded goods:

In the department-store investigation, we asked 394 merchants their attitude on carrying branded merchandise. Two-thirds of these merchants replied favorably. These figures gain their significance from the fact that it was generally into the large cities and to the large merchants within those cities that we went. If we had asked 4,000 merchants the per cent of favorable replies would have been much higher, for small merchants in general are more favorable.

Analyzing the objections, we found that 54 per cent objected because the margin is narrower in advertised lines, and 35 per cent objected on the ground of brand; that is, they preferred to sell their own private brands, which, in many cases, meant that their cost of doing business was so high that it was necessary to sell noncompetitive goods to get over the high cost of doing business.

In general, the key to the attitude on advertised brands is cost of doing business—the higher the cost the less friendly the store to handling advertised goods. Now, costs vary according to three things:

- I. The larger the city the higher the cost.



II. The farther from the eastern market the higher the cost.

III. There are individual variations depending on the skill of the merchant and the grade of merchandise.

Certain influences have been operating to make large department stores more friendly to carrying advertised brands.

First, these stores want to stand in their own community as quality stores. The patron asks the clerk for an advertised article and is sold one of the store's brand in its place. The next day the same thing happens with another clerk, and the third day it happens again with still a different clerk. The patron says to herself, "The articles I buy in this store have quality, but I read in the magazines that other articles are quality articles." She is likely to try them and between the two standards of quality may cease to be a patron of the store; that is, the store that wishes to maintain its reputation as a quality store must be a fair declarer of quality.

Second, those stores that have an up-State trade find it necessary to carry and sell advertised merchandise in order to hold the patronage of those customers who are outside the effective reach of their newspaper publicity.

Third, and most important of all, is a realization of the necessity of volume, and that volume can most readily be obtained by selling what the people want; that is, by selling manufacturers' brands.

#### EXPENSE OF SELLING TO RETAILERS.

The chief objection on the part of manufacturers in regard to selling direct to retailers is the heavy expense necessary in order to reach this trade, the longer credits given, the necessity of carrying a large and assorted stock of finished goods, and the liability to losses due to failures of customers. One reason why some hosiery manufacturers have not been prosperous during recent years is that they have been trying to change from selling to jobbers to selling to retailers. Such a change is an expensive process. Time and money must be spent in building up a sales force. The trade of large retailers or of many small retailers must be secured, and a very expensive advertising campaign must be indulged in. This heavy cost of establishing a trade with retailers permits none but the largest manufacturers to enter into it, so that at the present time more hosiery is still sold to jobbers than to retailers. Following are expressions quoted from interviews with manufacturers in regard to selling to retailers and jobbers:

We prefer to sell to the jobbing trade, as doing business with the retailers requires a great assortment and a variety of styles. The retailer wants greater concessions and refuses to pay any more for the goods, even though the cost of yarn and the cost of labor have increased.

Mills are selling more goods direct to retailers, but jobbers can not be eliminated, as mills are not equipped to get the small orders from small retailers and carry this class of trade indefinitely, as payments from this trade are very slow.

We make goods to order and sell to jobbers. We are trying to cultivate the jobbing trade. We must sell to department stores, but they get jobbers' prices. The tendency of the trade is toward selling to retailers.

The jobber is essential to my business. In fact, he is the salvation of the small manufacturer, as he carries the stock which the manufacturer can not afford to do. The manufacturer with a small capital is, therefore, aided by the jobber who is ordering quantities and sharing the risk of loss. He works on small and legitimate profits. The retailer is the one who is making the great amount of profit, although he is not allowing any great margin to the actual producer, i. e., the manufacturer. The retailer's profits must necessarily be large, as his overhead expenses are enormous.

The tendency is to sell direct to retailers. When we sell to jobbers we do not make a permanent customer, but if we sell to a retailer he will probably stick with us. The jobber is going to be forced out in all lines of clothing, because every good retailer wants to buy direct.

We have only one commission house and bind ourselves to deal with him exclusively. There are great possibilities lying in selling direct to retailers. If we were starting a new business we would surely sell direct.

We prefer selling direct to retailers, and our trade is best in the small and medium-sized towns.

We sell our product direct to the trade under a brand name. We think the tendency is to smaller orders.

It has been customary for hosiery manufacturers to sell their output through the jobber or commission house, but of late years it has become more general for the manufacturer to sell direct to the retailer, especially if he has a trade-marked, advertised article. We prefer to sell to retailers exclusively and do so; we sell no goods whatever to the jobber, the principal reason being that we feel that by having closer relations with the retailer ourselves we can hold his trade better and control our distribution more satisfactory, especially in the way of protecting exclusive agents in small towns. The tendency is markedly toward smaller orders, from the smallest dealer to the largest department store. This is due to two reasons: First, the new custom that merchants are adopting to carry as small a stock as possible, letting the manufacturer carry the stock for the dealer. The dealer is becoming more and more a "hand-to-mouth" buyer. The other reason is the parcel-post system, which makes it possible for the dealer to receive very small quantities of goods at a low transportation cost, whereas previously he was obliged to pay high express rates on a small quantity of goods. As to competition in prices, goods to-day have to be sold to the trade at as low a price as or lower than at any time in the history of the business, according to our best knowledge. This also covers the items of discounts, time, and dating allowances.

We make contracts, November to January, for delivery May 1 and afterwards. We sell through a commission house. There are two ways of selling; the regular way carries a discount of 6 per cent, which means that payment is due November 1, but this is a trade with a cash discount. We can borrow money from our commission house at 6 per cent.

From the above interviews, and from a table which follows, it will be seen that manufacturers distribute their products in three ways—to retailers, to jobbers, and through commission houses. Each method has its advantages and disadvantages.

As has been noted, the manufacturer who sells direct to the retailer is put to heavy selling expense, an expense much greater than would be required to market his goods if he sold to jobbers or through commission houses. Further, he has to manufacture and carry a much more diversified and larger stock of finished goods. He also has to wait longer for his money and undergoes a greater risk of loss through bad accounts. On the other hand, the manufacturer who sells to retailers receives higher prices for his goods, and once a line of customers has been established he is more certain to hold them than is the case when he deals with jobbers. Besides receiving higher prices, the producer who sells to retailers has a greater opportunity for expanding and enlarging his business than one who ties himself up with jobbers or commission houses.

The advantages in selling to jobbers or through commission houses are that the manufacturer who sells in this manner is relieved of great expense for actual selling and advertising, is not so liable to losses due to bad debts, and has the advantage of knowing ahead just about what his business for the year will be. Many jobbers and commission houses will advance money to manufacturers, and this is a distinct advantage to the producer of limited capital.



## COMPARATIVE ADVANTAGES OF DIFFERENT METHODS.

In his address delivered before the 1915 annual convention of the National Association of Hosiery and Underwear Manufacturers Mr. Charles Coolidge Parlin discussed the merchandising of hosiery and underwear. He divided merchandise into two classes—"convenience goods" and "shopping lines"—described as follows:

Convenience goods comprise notions, cottons under 15 cents a yard, stockings for children, cheap underwear, and in general the lower end of woman's purchases. \* \* \*

Shopping lines in general comprise the upper end of woman's purchases—cloaks and suits, carpets, millinery, the better grades of hosiery and underwear, and all those articles which a woman records on her mental shopping tablet (which never forgets) and of which she defers the purchase until a trip to her shopping center.

Shopping lines are described as "sharply concentrated into a relatively small number of cities and into a very small number of stores within each city, which we are accustomed to call department stores." Convenience goods are handled not only by the large stores, but are sold by small suburban and rural stores distributed over a wide area. Mr. Parlin continues as follows:

Hosiery and underwear partake of the characteristics of both convenience goods and shopping lines. The cheaper grades—that is, hosiery of 25 cents and under and underwear of 50 cents per garment and lower—are convenience goods. They are scattered through a multitude of suburban shops and rural stores and the manufacturer who would secure his maximum market needs the assistance of the jobber.

The upper lines—that is, hosiery of 50 cents and up, underwear exceeding 50 cents per garment—partake of the nature of shopping lines and the trade in women's lines tends to concentrate into a comparatively small number of cities and into a comparatively small number of stores in those cities, and the higher priced line the greater the degree of concentration. The manufacturer of higher priced hosiery and underwear, therefore, will be able with his own salesmen to cover enough stores to reach the great bulk of his market. \* \* \*

"But," says the manufacturer of the convenience line of hosiery or underwear, "my line is sold partly in department stores and partly in suburban shops and rural stores, which can be reached only through the jobber. What is the relative importance of the direct-sales market and the jobber market?"

To answer this question in making our department-store investigation we studied the jobbing and retailing conditions in every one of the hundred largest cities and in many of the minor cities. In these we estimated the volume of the individual department stores, and on the basis of the cities we investigated we estimated the volume of department-store business in the other cities, and reached a total of \$2,094,000,000 for the total trade of the United States in dry goods and ladies' ready-to-wear.

Now, the question is, What per cent of the \$2,094,000,000 is bought direct and what per cent is bought through jobbers?

We found for the most part that merchants who sold more than \$200,000 of merchandise per year wanted to buy direct. A man who is buying less than \$100,000 prefers to buy of the jobber; he wants to keep his stock down, and often he is financially weak and leans on the jobber. We estimated that there are 1,140 stores that do more than \$200,000 of business each, and these stores together do 43 per cent of our \$2,094,000,000. The multitude of textile stores that do under \$100,000 of business, we estimated, do 47 per cent of that total. This leaves 10 per cent for the class between. In this class, if a merchant is a plunger by nature he buys large quantities and goes direct; if he is conservative, he keeps his stock down by buying from the jobber.

Of course, large stores buy some things from the jobber; many smaller stores buy some things direct. If we offset one against the other and divide the 10 per cent of the middle class evenly, it gives us 48 per cent for direct channels and 52 per cent for jobbing channels.

But, in order to ascertain the per cent of any given line that may be successfully handled through jobbing channels, it is necessary to analyze the figures more closely, for in the 48 per cent of direct sales is included the great bulk of the strictly shopping lines, which means, of course, that it contains proportionately less of convenience goods. Thus, of a strictly convenience article, such as black and white thread, I

suppose that not more than 25 per cent is sold by stores included in our direct-purchase group and that fully 75 per cent is sold by the jobber class of stores; and in convenience goods, as a whole, at least 70 per cent seems to belong logically to the jobbing trade and probably not more than 30 per cent is handled by those stores which are actively seeking direct-purchase connections.

If a manufacturer of a convenience line of hosiery and underwear had, therefore, to take his choice between direct sales and jobber sales, the jobber sales would offer the largest opportunity. But of the 43 per cent that definitely seeks direct sales nearly half is done by 200 stores, each one of which does over a million dollars of business. Now, these stores are so insistent on buying direct that the jobber ordinarily can not sell them, and, recognizing this, is usually willing that the manufacturer sell them direct.

Hence as a merchandizing policy for a manufacturer of convenience goods it seems advantageous to sell direct to the 200 stores that do over a million dollars of business each and use the jobber for the rest of his business.

The conclusion would seem to be that the manufacturer producing low-priced hosiery or convenience goods would find it to his advantage to market his product to jobbing houses, as through this channel a great portion of the convenience stores and shops can be most easily reached with a low-selling cost to the manufacturer. On the other hand, the producer of high-priced hosiery or the manufacturer of diversified lines of hosiery would seem to be able to secure best results by selling direct to the retail trade.

In an address delivered before the Jobbers Association of Knit Goods Buyers in New York January 11, 1915, Mr. Frank L. Chipman, of Charles Chipman's Sons, New York, said:

There are a number of factors contributing to the distribution of hosiery from manufacturer through jobber to retailer which should be borne in mind.

First. The enormous growth of magazines and papers each carrying its selling message.

Second. The great growth of mail and mail orders on the part of catalogue houses, department stores, and manufacturer to retailer.

Third. The feeling on the part of retail hosiery buyers that a mill purchase will greatly ingratiate him in the eyes of his employer, which too often is a fact, with the result of his willingness to give preference to that which he believes to be a mill purchase.

Fourth. The depreciation of quality of merchandise which always exists when it is bought to sell on its appearance, rather than on intrinsic merit to the consumer.

Fifth. There are some 2,000 hosiery mills scattered almost in every State of the Union, more built each year, and a great many of these distribute merchandise locally to accommodate their retail friends, without the competition of the standard mills.

The department stores have so grown, together with their mail-order departments and bargain basements, and with the ease of reaching them in larger cities, of which there are 228 in number of over 25,000 inhabitants, as to reach directly one-third of the population of this country. These stores use and buy large lots of hosiery, and the majority of it is bought direct from mills, except to fill in. Their initial orders in case lots and many duplicate orders are filled by these direct-selling mills, and during the remainder of the season these manufacturers, who are now selling the retail trade, have ample time to extend their trips to the small towns at very little increased cost, thereby making competition for the jobber difficult, and the loss of this business to the jobber and the mills that the jobber buys from.

## METHODS OF SELLING BY ESTABLISHMENTS.

Table 59 shows the per cent of profit and selling cost based on net sales, by groups and individual establishments; also actual discount given, the per cent of total sales to jobbers, commission houses, and retailers, and the per cent exported.

TABLE 59.—METHODS OF SELLING, PERCENTAGES OF PROFITS, AND SELLING COSTS, BASED ON NET SALES, BY ESTABLISHMENTS AND BY GROUPS OF ESTABLISHMENTS.

Establishments and groups.	Per cent of selling cost and manufacturing profit based on net sales.			Per cent of sales to—				Actual discount, per cent.
	Total selling cost.	Salaries, commissions, etc.	Manufacturing profit.	Jobbers.	Commission houses.	Retailers.	Exported.	
Mills making full-fashioned or both full-fashioned and seamless hosiery (East and West), Group I:								
Establishment No. 1.....	6.25	4.44	12.83			100.00		2.44
Establishment No. 2.....	6.68	2.62	11.17					8.71
Establishment No. 3.....	4.12	3.11	3.79			100.00		6.32
Establishment No. 4.....	3.62	1.42	2.44	100.00				6.42
Establishment No. 5.....	2.99	1.51	4.59					2.74
Establishment No. 6.....	6.04	4.83	13.32	100.00				2.58
Establishment No. 7.....	8.35	3.95	7.27			100.00		6.99
Establishment No. 8.....	4.35	3.43	16.75	100.00				2.27
Establishment No. 9.....	7.19	3.54	6.49			100.00		2.71
Average.....	5.95	3.39	8.92	43.37		56.63		3.98
Mills making seamless cotton hosiery (Pennsylvania and New York), Group II:								
Establishment No. 10.....	4.59	1.52	7.80					(a)
Establishment No. 11.....	9.37	5.15	11.04	100.00				3.00
Establishment No. 12.....	16.23	8.51	4.16					(c)
Establishment No. 13.....	1.77		3.30	90.00		10.00		5.01
Establishment No. 14.....	1.40		4.52	90.00		10.00		2.14
Establishment No. 15.....	7.08	.48	1.11	75.00		25.00	2.00	3.00
Establishment No. 16.....	8.81	3.25	1.08	98.00				2.59
Establishment No. 17.....	2.71	.89	5.35	100.00				5.08
Establishment No. 18.....	3.15	.48	3.10	100.00				5.63
Establishment No. 19.....	6.32	4.74	11.08	100.00				2.50
Establishment No. 20.....	3.91	1.71	9.86	100.00				7.00
Establishment No. 21.....	3.99	1.65	5.60	100.00				4.57
Establishment No. 22.....	4.78	3.05	2.27	100.00				3.00
Establishment No. 23.....	4.52	1.11	2.47	100.00				3.31
Establishment No. 24.....	8.93	5.61	1.63	100.00				3.10
Establishment No. 25.....	15.35	12.14	1.11					1.84
Average.....	7.92	4.87	1.76	98.45		1.45	0.10	3.28
Mills making seamless cotton hosiery (South), Group III:								
Establishment No. 26.....	5.35	1.56	11.99	100.00				3.28
Establishment No. 27.....	.94		7.83	(c)				2.04
Establishment No. 28.....	6.73	2.26	2.31	100.00				3.26
Establishment No. 29.....	3.43	2.04	2.72	100.00				2.46
Establishment No. 30.....	1.54	.82	8.76	100.00				1.40
Establishment No. 31.....	1.45	.51	8.45	100.00				.84
Establishment No. 32.....	6.62	6.42	.09	100.00				2.44
Establishment No. 33.....	4.12	2.18	13.23	100.00				3.73
Establishment No. 34.....	4.30	2.58	8.28	100.00				1.02
Establishment No. 35.....	12.69	6.54	9.78			100.00		3.30
Establishment No. 36.....	4.09	1.97	4.83	100.00				2.08
Establishment No. 37.....	.62	.31	9.24	100.00				1.03
Establishment No. 38.....	2.23	.45	4.04	100.00				1.02
Establishment No. 39.....	6.72	3.92	19.91	100.00				2.21
Establishment No. 40.....	2.42	.37	5.78	100.00				2.04
Establishment No. 41.....	8.02	4.02	6.90	50.00		50.00		1.94
Average.....	5.75	2.89	7.60	74.95		25.05		1.97
Mills making seamless hosiery of cotton and silk (Pennsylvania), Group IV:								
Establishment No. 42.....	10.45	3.82	15.12	100.00				1.83
Establishment No. 43.....	5.43	1.81	.25	100.00				2.00
Establishment No. 44.....	9.93	4.08	11.00			100.00		1.46
Establishment No. 45.....	7.38	4.50	5.85	90.00		10.00		2.58
Establishment No. 46.....	5.48	3.71	6.67	100.00				2.50
Establishment No. 47.....	4.55	2.86	2.34					2.00
Establishment No. 48.....	3.74	2.32	6.45	100.00				4.93
Establishment No. 49.....	3.67	2.21	2.16	99.00			1.00	1.88
Establishment No. 50.....	4.01	2.43	4.31	100.00				2.36
Establishment No. 51.....	13.67	7.08	11.19			98.00	2.00	1.27
Establishment No. 52.....	7.43	4.44	8.21	100.00				2.57
Average.....	7.42	4.16	3.83	96.62		2.91	.47	2.28

a Other data not reported.

b Loss.

c Sales to other manufacturers.

TABLE 59.—METHODS OF SELLING, PERCENTAGES OF PROFITS, AND SELLING COSTS, BASED ON NET SALES, BY ESTABLISHMENTS AND BY GROUPS OF ESTABLISHMENTS—Continued.

Establishments and groups.	Per cent of selling cost and manufacturing profit based on net sales.			Per cent of sales to—				Actual discount, per cent.
	Total selling cost.	Salaries, commissions, etc.	Manufacturing profit.	Jobbers.	Commission houses.	Retailers.	Exported.	
Mills making seamless hosiery of cotton and silk (West), Group V:								
Establishment No. 53.....	4.02		13.10			100.00		3.70
Establishment No. 54.....	20.38	9.37	4.54			100.00		.51
Establishment No. 55.....	10.50	6.15	6.33			100.00		1.74
Establishment No. 56.....	5.78	2.93	5.10	100.00				2.50
Establishment No. 57.....	17.63	9.04	2.48			100.00		1.18
Establishment No. 58.....	8.90	4.61	4.72			100.00		4.31
Establishment No. 59.....	12.16	3.64	5.81			100.00		.21
Establishment No. 60.....	29.06	9.40	2.28			100.00		1.91
Establishment No. 61.....	24.24	5.59	10.11			100.00		1.64
Average.....	21.94	6.14	6.56	3.41		96.59		1.75
Mills making seamless hosiery of wool and cotton mixed (East, West, and South), Group VI:								
Establishment No. 62.....	3.50		6.86	100.00				4.00
Establishment No. 63.....	5.41	1.95	4.17	100.00				2.35
Establishment No. 64.....	5.44	4.45	2.21	100.00				1.72
Establishment No. 65.....	4.69	.81	1.30	100.00				1.93
Average.....	5.05	2.19	2.32	100.00				2.00
Mills making seamless hosiery and spinning yarns (East and West), Group VII:								
Establishment No. 66.....	11.33	10.44	2.86		100.00			None.
Establishment No. 67.....	11.02	7.71	8.20	100.00				5.00
Establishment No. 68.....	6.29	2.14	1.12	15.00		85.00		2.03
Establishment No. 69.....	4.90		2.64		100.00			None.
Establishment No. 70.....	5.41	3.09	9.58	100.00				2.71
Establishment No. 71.....	4.59	4.20	9.59		100.00			None.
Establishment No. 72.....	11.52	8.64	12.69			100.00		1.96
Establishment No. 73.....	11.42	7.69	4.80			100.00		1.68
Average.....	9.45	6.65	7.08	6.60	24.50	68.90		1.48
All mills reporting data (Groups I to VII), average.	8.31	4.54	6.66	51.04	4.08	44.83	0.05	2.90
Mills making seamless hosiery (Groups II to VII), average.	9.50	4.91	5.52	54.69	6.03	39.20	.08	2.18
Mills buying all yarns and making seamless hosiery (Groups II to VI), average.	9.52	4.35	5.05	70.38		29.52	.10	2.40
Mills making seamless cotton hosiery (Groups II and III), average.	6.54	4.06	5.48	81.84		18.13	.03	2.45

a Loss.

The table shows that of the total net sales of the 73 establishments reporting (Groups I to VII) 51.04 per cent was to jobbers, 4.08 per cent through commission houses, 44.83 per cent to retailers, and 0.05 per cent was exported.

## PROFITS ON SALES TO RETAILERS AND JOBBERS.

Of the 73 establishments, 45 reported that they sold all or most of their product to jobbers, 3 that they sold all or most of their product to commission houses, 18 that they sold all or most of their product to retailers, 1 that it sold half of its product to jobbers and half to retailers, while 6 did not report as to whom their products were sold. In Table 60 a comparison is made of the profits of the estab-

lishments that sold the larger part of their products to jobbers or through commission houses, or to retailers:

TABLE 60.—NET SALES, PROFITS, AND AVERAGE PERCENTAGES OF PROFITS, BASED ON NET SALES, OF ESTABLISHMENTS HAVING DIFFERENT METHODS OF SELLING.

Establishments the larger part of whose sales were to—	Establishments.	Net sales.	Manufacturing profits.	Average manufacturing profit.	Amount of final profit.	Average final profit.
Jobbers and commission houses	48	\$12,527,976	\$821,786	Per cent. 6.56	\$730,907	Per cent. 5.83
Retailers.....	18	10,953,144	786,274	7.18	664,473	6.07

As shown by this table, the establishments that sold from 50 to 100 per cent to jobbers or through commission houses had an average manufacturing profit of 6.56 per cent and an average final profit of 5.83 per cent on their net sales; and the establishments that sold from 50 to 100 per cent to retailers had an average manufacturing profit of 7.18 per cent and an average final profit of 6.07 per cent on their net sales.

The average percentages of profit of establishments that sold mostly to retailers was larger than those of establishments that sold mostly to jobbers, but less than those of establishments that sold mostly to commission houses. It will be noted that the percentages for establishments that sold mostly to commission houses are based on the reports of only three establishments.

Referring to Table 59, it will be seen that the average selling cost of all establishments reporting (Groups I to VII) was 8.31 per cent of the net sales. It should be understood that in this table and in the following analysis of the table the percentages shown for salaries, commissions, and expense of salesmen are included in the percentages of total selling cost. The table shows that the salaries, commissions, and expense of salesmen of all establishments reporting averaged 4.54 per cent.

The average percentages of the establishments in different group combinations for selling cost and manufacturing profit, based on net sales, were as follows:

Groups I to VII, 73 establishments, all reporting: Total selling cost, 8.31 per cent, of which salaries, commissions, and expense of salesmen were 4.54 per cent; manufacturing profits, 6.66 per cent.

Groups II to VII, 64 establishments making seamless hosiery: Total selling cost, 9.5 per cent, of which salaries, commissions, and expense of salesmen were 4.91 per cent; manufacturing profits, 5.52 per cent.

Groups II to VI, 56 establishments making seamless hosiery and buying all of their yarns: Total selling cost, 9.52 per cent, of which salaries, commissions, and expense of salesmen were 4.35 per cent; manufacturing profit, 5.05 per cent.

Groups II and III, 32 establishments making seamless hosiery of cotton and buying all of their yarns: Total selling cost, 6.54 per cent, of which salaries, commissions, and expense of salesmen were 4.06 per cent; manufacturing profit, 6.48 per cent.

A further analysis of the table shows that Group V, including mills in the West making seamless hosiery of cotton and silk, had a selling expense of 21.94 per cent, which is more than twice as large as that

of any other group. All of the establishments in this group except one sold their entire product to retailers, which accounts for the heavy selling expense.

Group VI, including mills in the East, West, and South, making seamless hosiery of wool and cotton mixed, shows a total selling cost of 5.05 per cent, which is lower than that of any other group. All of the establishments in this group sell exclusively to jobbers.

It should be noted that although Group VI had a lower selling cost than any of the other groups, its manufacturing profit was only 2.19 per cent as compared with a profit of 6.56 per cent shown by Group V, which had a selling cost more than four times as large as that of Group VI.

There was a great variation in the time and cash discount usually allowed, as well as the discount actually given. The discount usually given, however, in the greatest number of cases was 2-10-30 (i. e., 2 per cent for payment in 40 days) or 2-10-60 (i. e., 2 per cent for payment in 70 days). Establishment No. 2 shows the highest actual discount allowed (8.71 per cent), followed by establishment No. 20 (7 per cent) and establishment No. 7 (6.99 per cent). Establishments Nos. 69 and 71 show no actual discount because they sold net to commission houses.

#### PROFITS AS AFFECTED BY NATIONAL ADVERTISING.

As shown by table No. 59, the average manufacturing profit based on net sales of the 73 establishments reporting was 6.66 per cent. Of these 73 establishments, 9 advertised nationally; that is advertised in magazines and papers with a national circulation, other than trade journals. The percentages of manufacturing profit of these 9 establishments are shown in Table 61.

As shown by Table 61, the two establishments in Group I, which made full-fashioned or both full-fashioned and seamless hosiery, and which advertised nationally, earned a smaller average percentage of manufacturing profit, 6.77, than the average, 8.92, of all establishments in that group. In the case of establishments making seamless hosiery of different materials, those that advertised earned a higher average percentage of profit than the average of their respective groups.

TABLE 61.—METHODS OF SELLING AND PERCENTAGES OF PROFITS OF ESTABLISHMENTS THAT ADVERTISE NATIONALLY.

Classification.	Groups.	Establishments.	Method of selling.	Average per cent of manufacturing profit, based on net sales of—	
				Specified establishments.	Groups.
Full-fashioned or both full-fashioned and seamless.	I.....	2	100 per cent to retailers.....	6.77	8.92
Seamless, cotton.....	II and III...	2	One, 50 per cent to jobbers and 50 per cent to retailers; one, not reported.	7.34	5.56
Seamless, cotton and silk..	IV and V...	3	Two, 100 per cent to retailers; one, 98 per cent to retailers, 2 per cent exported.	8.24	5.23
Seamless, mills spinning yarns.	VII.....	2	100 per cent to retailers.....	8.10	7.08



In Table 62 data regarding these nine establishments are presented to show their percentages for salaries, commissions, and expense of salesmen, cost of advertising, and total selling expense, on the basis of their net sales, and also corresponding average percentages for their respective groups.

As shown by Table 62, the average percentages of cost of advertising, cost of salaries, commissions, and expense of salesmen, and total selling expense were higher for the specified establishments that advertised nationally than the averages for their respective groups. This is true regarding the establishments making each class of hosiery classified in Table 61. It is noticeable that the average percentage of manufacturing profit of the three establishments in Groups IV and V that advertise nationally, 8.24, was higher than the average of such establishments in other groups, as shown by Table 61, although the average percentage of cost of advertising and of total selling expense was much greater in the case of these three establishments in Groups IV and V than in the case of the establishments that advertise nationally in other groups, as shown by Table 62.

TABLE 62.—AVERAGE PERCENTAGES OF SALARIES, COMMISSIONS, AND EXPENSE OF SALESMEN, COST OF ADVERTISING, AND TOTAL SELLING EXPENSE OF ESTABLISHMENTS THAT ADVERTISE NATIONALLY, BASED ON NET SALES.

Groups.	Estab-lish-ments.	Total selling expense.		Salaries, commissions, and expense of salesmen.		Cost of advertising.	
		Specified establish-ments.	Groups.	Specified establish-ments.	Groups.	Specified establish-ments.	Groups.
I.....	2	7.67	5.95	3.71	3.39	1.72	0.79
II and III.....	2	9.77	6.63	5.96	3.66	1.79	.70
IV and V.....	3	22.76	14.78	6.56	5.18	10.50	5.55
VII.....	2	11.46	9.45	8.09	6.65	1.15	.75

#### TRADE ABUSES.

There are certain trade abuses common to the whole clothing industry which have their effect on the manufacture and sale of hosiery. These evils are cancellations, returns and allowances, requests for deferred shipments, extra dating, special discounts, etc. These evils have been prevalent for years, and as time goes on are increasing rather than diminishing. Though all hosiery manufacturers complain of these practices, they have never taken any positive step to eliminate them. While various remedies have been suggested in conventions and associations in the trade, none has ever been put into active practice owing to lack of cooperation.

**Cancellations.**—Of these trade abuses perhaps that from which the hosiery industry suffers most is cancellation, by which the buyer has the option of taking or refusing goods which he has ordered. A manufacturer may make a contract to deliver a certain number of cases of hosiery on a certain date, perhaps several months ahead. He will make up the order in good faith, with the full expectation that the contract will be lived up to, only to have the finished goods thrown back on his hands through a cancellation. This practice entails a

great hardship on the manufacturer, disturbs his business, and is the cause of heavy losses.

Cancellations have increased, due to the fact that buyers are aware that the manufacturers will rarely go to court to enforce a contract. This has led to careless buying, the buyer knowing that in the event of a dull market or other conditions affecting his sales he can always protect himself through a cancellation and throw the loss on the manufacturer.

Several manufacturers explained why they allowed the practice of cancellation. They admitted that they were in a position to insist on the fulfillment of a contract and would probably be upheld in court. They stated, however, that should they be forced to bring suit in order to enforce the contract they would make an enemy and in all probability permanently lose the future business of that particular buyer, and also establish for themselves a bad reputation with the trade. Rather than go to the expense of resorting to the courts and losing a customer, they prefer to accept the cancellation and trust to future business to make up their loss. It was stated that rarely does a certain number of cases of hosiery come exactly up to specifications. In that case it is easy for the buyer to claim that the goods are not as ordered. Thus, the manufacturer not only loses the suit but also the customer.

It was further stated that competition is so keen that a competitor will not stop to inquire what a buyer has done with some other manufacturer, but is glad to get the new account regardless of the reputation the buyer has for making cancellations.

An official in a very efficient and successful hosiery factory said in an interview that the establishment had decided some time previously not to accept a cancellation; that by exercising care in keeping the product up to a uniform standard there had been little difficulty in satisfying a line of steady customers, and that customers had become accustomed to the noncancellation rule, and the factory had lost little, if any, trade by enforcing it.

An editorial in the Dry Goods Economist for March 13, 1915, says:

It was admitted by several of the manufacturers that certain abuses and evils which now exist and have existed for years affect their business in a far greater degree than the tariff change. With these evils Economist readers are only too familiar. One of them is the tendency to cancel orders or break contracts which have been made and accepted in good faith. The other is the practice of requiring manufacturers to reduce the prices at which the goods have been sold in case of a decline in price at the time delivery of the goods is made. In each of these cases the trouble is due to the old, moss-grown, unbusinesslike method of which the Economist has frequently referred of regarding a contract or order as not binding on the purchaser.

**Price cutting.**—Another evil is that of buyers playing one manufacturer against another, and the consequent cutting of prices to get business. It was stated that many producers of hosiery frequently sold at a loss in order to make a sale, hoping thus to secure a permanent customer. This, however, is not effective. It might be true when selling direct to the retail trade, but when selling to jobbers the practice is ineffective, for the jobber will buy where he can get the best prices, and he rarely is the constant customer that the retailer is.

**Returns and allowances.**—This practice is another hardship the manufacturers complain of. In making a return or demanding an allowance the buyer claims that the goods do not come up to speci-



fications. The manufacturers state that they are perfectly willing to meet these demands if the goods are really inferior or damaged. However, it was said that the claim of inferiority was often a subterfuge on the part of the buyer to reduce his stock or to get rid of an unwise order.

*Other abuses.*—Requests for deferred shipments, extra dating, and special discounts also cause producers much annoyance and loss. Deferred shipments compel the manufacturer to hold the finished goods for some time. This necessarily takes up valuable space, and all the time the goods are being held interest and other expenses are mounting up on them. Concerning extra dating and special discounts, the manufacturer is placed in much the same position that he occupies in regard to cancellation. Rather than lose a customer he will comply with demands which are sometimes very unreasonable, knowing that his competitors are willing to meet the demands in the hope thus to establish a new permanent account.

In an article published in the New York Times of March 21, 1915, the following remedy for trade abuses is suggested:

The only apparent cure for this sort of an abuse is to have a cooperative organization of sellers, and under their direction an arbitration board made up either of executives of firms who are well posted on manufacturing or of practical mill men who would do nothing else than pass on such disputes and be in the employ of the organization suggested.

It was stated that buyers had been recently placing smaller orders than formerly and ordering more frequently. This cautious buying has caused much uncertainty among manufacturers, particularly in regard to deliveries. The following is quoted from Knit Goods for April-May, 1914:

Cautious buying has caused the knitters considerable annoyance because of deliveries. By waiting until their stock runs low, the buyers are compelled to demand almost immediate deliveries, which are impossible unless the manufacturers bear the brunt of the risk. If they knit in large quantities, they run the risk of not receiving reorders from the buyers who may feel a slack in demand, and therefore leave the stock on the hands of the manufacturer.

It is a general complaint among manufacturers that there is no cooperation among them in regard to dates for the opening of each season's trade. Interviews with them show that they are very distrustful of one another in regard to adhering to any agreement. When an agreement regarding an opening date is made, it is the common experience that it will be broken by some manufacturers starting out their salesmen before the fixed time. An editorial on this subject in Knit Goods for April, 1915, says:

Manufacturers, according to the Textile World Record, do not realize that in a good many cases they prove to be their own worst enemies. They have their associations and meetings and try to agree, for instance, on a time to open up their lines, but they do not agree, as each one thinks that he may be able to steal a march on the other one and go out first. He is not away a day when his competitor not only knows of this fact, but also knows what his prices are. The buyer is not as much interested in the first man as he is liable to be a little later on when he knows what all are doing, especially in a tepid market like the present. Then, again, what do they do? They take blanket orders subject to confirmation when the buyer comes to New York. He seems to forget, or does not appreciate, that his competitor also has a pocket full of these so-called "orders" and later on he has to do his work all over again. If it is a high market, the same condition exists, as the buyer does not want to pay the first man an advance. These conditions are decidedly unsatisfactory to everybody concerned. Whole-hearted cooperation would make the meetings of the association prove productive of genuine good.

## CHAPTER V.

### PRODUCTS, MACHINERY, AND PROCESSES.

#### HOSIERY PRODUCTS.

The knit-goods industry is one of the main subdivisions of cotton manufacturing and includes all goods made from one or more continuous threads into a web by a series of interlocking loops or stitches. Hosiery is that branch of the knit-goods industry which includes all coverings for the foot or leg.

#### KINDS OF HOSIERY.

Hosiery may be seamless, full fashioned, or cut up. Seamless hosiery is knit without seams on a circular machine. Full-fashioned hosiery is knit on a flat-frame machine and consists of shaped or fashioned pieces of selvaged fabrics, which are closed by seaming and looping. Cut-up hosiery, of which very little is manufactured, consists of a knitted fabric cut to shape by shears and then sewed together. Full-fashioned hosiery has an advantage in that it is more elastic and is knit to conform to the shape of the leg and foot, thereby insuring a perfectly fitting stocking. Full-fashioned hosiery is more adaptable to varied designs and ornamentation. The sole recommendation for seamless hosiery is the comfort resulting from the absence of seams. About 90 per cent of all the hosiery manufactured in this country is seamless. Seamless hosiery is peculiarly American, the product of the American idea of manufacturing, namely, speed, production, and cheaper price. Seamless hosiery as a manufactured product had its beginning in America, and its rapid development in a great measure was due to the lack of the skilled help needed in the manufacturing of full-fashioned hosiery.

Hosiery may be of cotton, merino, wool, worsted, silk, artificial silk, silk mixed with or plated upon some other yarn, and may be for men, women, children, or infants.

#### HISTORY OF HOSIERY STYLES.

Thirty-five years ago, when people wore heavy-weight, full-sleeved, and ankle-length underwear, all hosiery, even for men, was made of wool or merino. As the public's ideas in regard to the health and sanitation of heavy underwear underwent a change, these ideas were reflected upon hosiery. Cotton gradually began to supersede wool. It was more comfortable and cheaper. The only problem before the manufacturer was to make cotton hose that would last. As light-weight underwear became more and more the accepted mode, light-weight hosiery, made of finer yarns, came into vogue. The woolen

stocking has nearly disappeared, and to-day is worn only by lumbermen and sportsmen and in rural communities.

At the present time there is a decided and popular demand for silk, artificial silk, and silk-plated hosiery. From a luxury a few years ago, the wearing of silk hosiery has become a common practice. The soft silky feeling that people enjoy so much, the modern craze for dancing, necessitating the wearing of pumps, the tendency of men and women to wear tight-fitting clothing and use low shoes all year round, have given a startling acceleration to silk-hosiery manufacturing. All people can not afford pure silk hosiery. The demand for some sort of silk has led the manufacturers of cotton hosiery have been compelled, in order to compete with the silk-hose manufacturers, to use mercerized yarns so as to produce a stocking with a luster.

Embroidery, lace, insertion, and beading for ladies' hosiery is at the present time used to only a very moderate degree, the great demand being for plain goods. In men's hosiery there is but a slight demand for fancy styles.

#### DEMAND FOR SEAMLESS AND FULL-FASHIONED HOSIERY.

As between seamless and full-fashioned hosiery, the women usually prefer the full-fashioned stocking. Full-fashioned silk hosiery is expensive, but full-fashioned cotton hosiery is common, though its price is as yet too high for universal use. Men and children, as a rule, wear seamless hosiery, as its wearing qualities are better than the full fashioned, though the fit is not so good and the sock on being washed loses its shape. Men and children, not caring about so perfect a fit, have continued to wear seamless hosiery, though there is a tendency at the present time for men, on special occasions, to use full-fashioned hose.

#### HOSIERY IMPROVEMENTS.

There have been many recent improvements in hosiery, either in the line of improving the appearance or of getting longer wear. Among them is a full-fashioned seamless stocking; a seamless stocking knit with spring needles to produce a fabric as good as the full fashioned; an entirely seamless stocking, even the toe being knit on the machine; and separate feet which can be attached to the leg of any stocking when the original feet wear out. Originally hosiery for men was made to be worn without garters. Ribbed tops came in so as to fit the leg better, but as a sock usually loses its elasticity after a short period, garters came into use for men. Supporters for women and children soon followed. Since mercerized and silk hosiery have come into vogue, the public has often complained of the waste caused by the supporter tearing holes in the stockings. To remedy this one German manufacturer has brought out two new improvements adaptable especially to women's hosiery. First, an additional garter welt, which forms a constituent part of the stocking; and second, two loops, each 1 inch wide and  $1\frac{1}{2}$  inches long, on opposite sides of the stocking. The loops are integral parts of the stocking and wear does not extend to the stocking proper. One American manufacturer has introduced half hose so made that the upper, elastic part of

the sock holds it firmly in place without the aid of a garter. Another American manufacturer attaches a satin tab with a buttonhole in the center for the garter button.

#### HOSIERY MACHINERY.

##### HISTORY.

Knitting machinery both for hosiery and underwear started in 1589 with the invention in England of the stocking frame by William Lee. He saw the possibility of knitting at one operation the complete course, instead of a single loop, by bringing all of the loops forward simultaneously and casting them over a new corrugated thread. After some experimenting he accomplished this, and so we received the hook form, or barbed bearded needle, which to this day is used in every country where the knitting industry is established.

Meeting with no encouragement from the royal authorities, Lee moved to Rouen, France, and, though after his death his brother returned to England, the knitting industry had its beginning in France. Lee's final machine was full fashioning, had eight needles to the inch in width, and produced a plain web. Instead of one needle to hold the stationary loop while those in the moving row were being inserted, as in hand knitting, there were as many needles as loops in the breadth of the web, alternately forming and giving off loops. The machine had hooked needles and an arrangement for closing the hook in the needle, so that one loop could be drawn through another.

The revocation of the Edict of Nantes, in 1685, was probably the direct cause of the beginning of the knitting industry in Germany, it having probably been established there by refugees from France. It began in Hesse, and thence spread to the Chemnitz district, where, because of the surrounding mountains with their plentiful supply of the wood needed for the knitting frames, the industry became firmly established, and that district remains to-day the chief German center for hosiery and knit goods.

In 1758 Jedidah Strutt, of Derby, England, invented the hosiery machine which made a plain ribbed fabric, known to-day as the Derby rib. His invention was not an improvement on Lee's machine, but simply an addition. He left Lee's machine unaltered, but added to it a ribbing mechanism. The rib was accomplished by adding a second series of needles, placed at right angles to and between those on Lee's machine.

In 1764 Shaw, Morris, and Betts took out a patent for making eyelet holes in knitted fabrics by the use of needles.

In 1769 Sam Wise took out a patent for changing the hand frame to a power frame by putting a revolving shaft in the lower part of the frame work which could be turned by any motor power.

In 1775 the warp machine was invented, the credit of the invention being disputed. In the United States up to 1775 there were only 150 stocking frames, most of those being in Germantown, Pa.

In 1777 William Betts invented a power frame, the needle bar moving backward and forward and also upward, in order to press the needle against the fixed presser.

In 1780, frames having been made wider, they were utilized to knit the web for shirts and drawers.

In 1786 George Holland, in London, introduced fleecy hosiery. This was done, without any additional mechanism, by variation in the manipulation of the frame at the lining courses.

In 1789 an unknown inventor, by adding a press-off tackle, produced broad ribs, and in the same year Rose, of Nottingham, invented thread carriers.

In 1798 Decroix, in France, invented the circular knitting machine.

In 1801 Hiram Flint invented the spring slur cock, which saved the adjustment of the slur cock for various qualities of work.

In 1807 Dawson invented the unequal surface wheels for traversing purposes.

The years 1810 to 1815 were very poor for frame-work knitting. The early effects of the substitution of machinery for hand labor generally resulted in great poverty for the working classes. So-called manufacturers who owned knitting frames let them out to middlemen in town and country, and also supplied them with the yarn. The middleman had to pay the same price for having the work done as he received from the manufacturer, and hence there sprang up the system of rents and charges. The middleman charged the knitter for needles, which the latter had to cast in lead bars, and also charged him for frame rent, for light and fuel, for imperfect work, etc. Riots were common; frame breaking and looting were frequently resorted to.

By the year 1812 England, Ireland, and Scotland had 29,582 stocking-knitting frames, France, 6,859, and Germany, 2,340. In six other countries of Europe and Armenia there were 3,990.<sup>a</sup>

In 1816 Marc Brunel invented a circular knitting machine which made a tubular web.

In the United States, up to 1831, Philadelphia and Germantown, Pa., were the only large centers for the manufacturing of hosiery.

In 1832 Egbert Egberts, at Cohoes, N. Y., for the first time successfully produced a knit stocking web 28 inches wide.

In 1838 Luke Barton invented a power frame with a horizontal moving needle bar, but the narrowing was still performed by hand. Formerly the whole stocking had been made on one frame; afterwards it was made in parts, the leg first, usually with the heel, and then it was taken to a frame with smaller dimensions for knitting the foot.

In 1847 Matthew Townsend, in England, invented the self-acting latch needle. This was the first practical alteration of Lee's original bearded needle. This needle consisted of a spoon-shaped latch, attached to the stem near the hook end by a pin. The eye of this needle was closed by a little latch instead of being pressed together like the bearded or spring needle. Townsend died in America. His new form of needle was to revolutionize the entire American knitting industry.

In 1853 the circular latch-needle machine was introduced in England.

In 1855 Aiken, an American, patented a needle-latch regulator and yarn carrier which was adjustable to other machines.

In 1856 Nopper and Fouquet patented, in France, a large sinker wheel, with the presser and knocking-over cam inside. This was the real start of French circular knitting machinery.

In 1857 Luke Barton, in England, introduced a self-acting, narrowing power frame.

<sup>a</sup> William Felkin: History of the Machine-wrought Hosiery and Lace Manufacture, pp. 437-438.

In 1858 E. E. Kilbourne, an American, patented the first automatic machine for making full-fashioned goods.

In 1860 William Goddard, of New York, patented a machine for the manufacture of seamless hosiery, or tubular knitted fabrics. In the same year William McNary, of Brooklyn, brought out a machine for producing the whole leg and foot of a seamless stocking by a continuous operation.

In 1862 Tom Langham, of Philadelphia, patented a machine for making a circular ribbed fabric by a series of self-acting needles, made to operate a part on the inside and others on the outside.

In 1863 I. W. Lamb, an American, invented a new type of machine, which consisted of two horizontal flat beds, but which soon was altered so that the beds inclined at right angles to each other and at about 45° to the horizontal. This type of machine is not to be confused with the flat full-fashioning machine of the Cotton type, a description of which follows shortly.

The following table shows chronologically the important knitting inventions from Lee to Cotton:

TABLE 63.—BRIEF CHRONOLOGICAL LIST OF IMPORTANT KNITTING INVENTIONS.

[Ernest Tompkins: The Science of Knitting, p. 265.]

Invention.	Date.	Inventor.	Residence.	Authority.
Original knitting machine....	1589	William Lee.....	Calverton, Eng- land.	General.
Rib machine.....	1758	Jedidah Strutt and William Woollatt.	Derby, England.	Abridgments British patents.
Openwork.....	1764	Thomas and John Morris, John and William Betts; also Fernando Shaw.	England.....	Abridgments British patents, Quilter and Chamberlain.
Knit plush.....	1767	Henry Hardy, Thomas Davies, Andrew Dorilla.	.....do.....	Abridgments British patents.
Power knitting machine.....	1769	Samuel Wise.....	.....do.....	Do.
Warp machine.....	1775	Disputed.	.....do.....	Various.
Fleece fabric.....	1786	George Holland.....	London, Eng- land.	Quilter and Chamber- lain.
Thread carriers.....	1789	Rose.....	Nottingham, Eng- land.	Do.
Circular knitting machine.....	1798	Decroix.....	France.....	Pierer's Lexicon.
Circular loop-wheel machine..	1808	Leroy.....	Paris.....	G. Willkomm.
Movable bladed burr.....	1841	Jacquin.....	Troyes, France..	Franz Reh.
Movable bladed burr with blades moving parallel to needles.	1847	Fouquet.....	.....do.....	Do.
Automatic or latch needle....	1847	Matthew Townsend...	Leicester, Eng- land.	Quilter and Chamber- lain.
Parallel needle upright knit- ting machine.	1849	Moses Mellor.....	.....do.....	Felkin.
Circular latch-needle knit- ting machine.	1853	Thompson.....	.....do.....	Quilter and Chamber- lain.
Large jack-sinker burr.....	1856	Nopper and Fouquet..	Germany.....	G. Willkomm.
Lamb knitting machine.....	1863	I. W. Lamb.....	United States...	Quilter and Chamber- lain.

In 1864 William Cotton, in England, patented a flat-frame full-fashioning power machine, which has since been the standard for all types of full-fashioning hosiery machines. It is known as the Cotton type machine. Cotton's machine had a vertical moving needle bar, the work being drawn off horizontally. It had bearded needles. The fabric produced was as elastic as that made by the other machines with double their output. It had fashioning points which, at the required intervals, took off certain of the selvaged loops and replaced them on the needles, either inward or outward, according



to whether the fabric was to be narrowed or widened. Though Cotton's machine has been improved upon from time to time, he himself improving his original machines so as to produce ribbed fabrics, it remains in use to-day the same in principle as at the time of its invention.

#### AMERICAN DEVELOPMENT OF HOSIERY MACHINERY.

Cotton's machine brings us to the dividing point in the knitting industry of Europe and America. Europe accepted the Cotton type machine and devoted its entire energy to perfecting it. On the other hand, America accepted the circular machine, principally of the latch-needle type, and all of the development of the knitting machinery in this country has been in that line.

The invention of the latched needle opened a new field to knitting-machine inventors. The first circular machines had the needles soldered into jacks. The latched needle is not an improvement as regards the quality of the fabric made; in fact, it does not make a fabric as good as the bearded or spring needle, but when a latch needle is used on a circular machine the production is very much greater. European manufacturers have looked to the improving of the fabric, to the shaping of the fabric, etc., with the result that they continue to use the flat-frame spring-needle type of machine. Americans have always used more hosiery than probably any other people, and so in this country it was a question not so much of shaping the fabric but of production and cheaper goods. The result has been that the American inventors generally have centered all their faculties on the circular latch-needle machine with its greater production and cheaper cost. All of their efforts were to increase the speed and the production. Also there was more opportunity of selling circular machinery, for, being much cheaper than the flat-frame machine, it enabled men of very small means to go into hosiery manufacturing, which they could not have done if manufacturing was to be done with a machine of the Cotton type, the expensiveness of which prohibited anyone but a wealthy man from utilizing it.

Before 1850 hosiery was chiefly the product of the knitting needle plied by hand.

The second half of the nineteenth century witnessed the emergence of hosiery manufacturing from the household stage into a factory industry.

During the Civil War the Government purchased great quantities of heavy hosiery, thus giving a great impetus to factory manufacturing.

In 1851 Pepper brought out the first ribbing machine in this country.

In 1855 Aiken patented a circular machine run by power, but all the mechanism for shaping the stocking was controlled by hand.

In the next 10 years appeared the inventions of Kilbourne, Goddard, McNary, and Langham, previously described.

In 1879 the "Shaw" knitter appeared, this being the first machine which caused the heel needles to be raised and lowered individually.

Up to about 1880 most of the hosiery worn was cut hosiery. Cut hosiery was made on balmorals (round heads) in long tubes, cut in lengths, and feet cut in them and sewed on sewing machines.

In 1889 Branson & Son, of Philadelphia, brought out an automatic seamless machine, circular and self-reciprocating, carrying half the needles out of action before commencing the heel and toe, narrowing and widening in the heel and toe by throwing the needles into and out of action and automatically inserting an extra splicing to reinforce the heel and toe. The earlier machine was only partly automatic, as prior and subsequent to the making of the heel and toe the machine had to be stopped, and when the fashioning stage was reached the needles had to be picked up by hand. This machine simply made the leg and foot of the stocking automatically, and when it came to the reciprocal part, which knit the heel and toe, it had to be stopped and started up by hand. The stitches in the gore of the heel and toe were made by the operator lifting up the needles by hand, one at a time. After the appearance of the Branson machine, improvements in seamless knitting machines went forward by leaps and bounds.

After the Branson machine came on the market there began a great demand for cotton hosiery. Cotton was cheaper than wool and the cost of knitting it was cheaper; it was better adapted for rapid moving machinery, and it was lighter and could be sold cheaper. Since Branson's day the problem of the hosiery machine inventor has been threefold—first, to increase production, which means a cheaper commodity; second, to do away with skilled labor; and third, to make a finer stocking, by putting into a comparatively cheap, seamless stocking all of the fine fabric qualities of full-fashioned hosiery.

Previous to about 1890 very few of the colors that were used were fast dyes. Fancy striped hosiery was worn mostly. When aniline dyes were discovered they superseded logwood dyes.

Since 1890 almost every five years has seen an important change in seamless-hosiery machinery. In 1890 seamless hosiery was made on a semiautomatic machine of coarse gauges, with the cylinder and needles stationary and the cam rings and bobbins revolving. These machines usually contained from 84 to 108 needles. As will be readily understood, the more needles there are in the circumference of cylinders of the same diameter the finer will be the knitted fabric.

By 1895 machinery became fully automatic as regards yarn changes and the gauges had gone up to 160 needles, and attachments had appeared for inserting high splicing.

By 1900 machines were made in still finer gauges and had more yarn changes.

By 1905 still finer gauges were in use. Up to this time the general rule was a two yarn change.

About 1907 began the evolution of the plated stocking. Yarn changes had increased to four and five. This led to the revolving cylinder, with its five and six yarn changes, the bobbins and cams remaining stationary, the cylinder and needles revolving, which resulted in a finer appearing, more durable, and comparatively cheaper stocking. A manufacturer was no longer compelled to use the same yarn, either cheap or good, throughout his entire stocking, but could insert strong, heavy yarn in the heel and toe, could put a fine yarn in the leg or ribbed part, and still a different yarn in the sole. This resulted in the split foot. The split foot originally was a white bottom to take out the sweat dye, but machine manufacturers saw the



opportunity for economy and improvement; for example, making a stocking with a silk top and mercerized sole, etc. Split foot to-day means a foot made of a different material in the upper and instep portion from that used in the sole portion, and is usually made on a special knitting machine. Though the revolving cylinder was perfected about 1907, it was not generally in use until about 1910.

#### SEAMLESS KNITTING MACHINE.

The recognized standard seamless knitting machine of to-day is latch needle and circular and is of the revolving cylinder type, with at least four yarn changes. When the cylinder revolves, each needle catches the yarn as it passes the feeding point. The machine has a device for sectional slackening of the fabric prior to heavy yarn changes. It makes an antirunback course to prevent raveling from garter tears. It plates silk upon cotton. There is also a device to lengthen the stitch in the lower half of the foot, to make up for the extra weight of the yarn in the splicing, so as not to get a boardlike stiff finish. The shaping principle of the machine, though this does not mean shaping in the full-fashioning sense, is as follows: In knitting the leg, which is to be wide, the tension is loosened, the cylinder is raised, and the distance between the cam and the top of the eye is increased, resulting in a larger drawn stitch and a wider or looser fabric. When the ankle is reached and a narrower fabric is desired, the tension is tightened, the cylinder is lowered, the distance from the cam to the top of the cylinder is shortened, and a shorter stitch is drawn, resulting in a tightened fabric.

Modern machines are made up to 240 needles, with a usual cylinder diameter of from  $3\frac{1}{2}$  to  $3\frac{3}{4}$  inches. The machine in common use is 220 needles, and some manufacturers have machines with as many as 260 needles to a machine of  $3\frac{3}{4}$  inches diameter. The machines are of very high speed, with from 230 to 270 complete revolutions per minute, and, by changing certain adjustments, can make both men's and women's hosiery. This, however, is not usually done, one machine being used to knit men's hose and another machine for women's stockings. The machine automatically cuts off the yarn when the stocking is finished, and drops it through a long cylindrical-shaped tin box, so that it will not be soiled by the oil and grease of the machine. The machine can also be used for making plated goods. Machines are made in all diameters from  $2\frac{1}{4}$  inches to 4 inches, the popular diameter for both men's socks and women's stockings being  $3\frac{3}{4}$  inches. The machines for the finest quality of seamless hosiery are made up to  $21\frac{1}{2}$  needles to the inch, and machines for making coarse seamless hosiery as few as 5 needles to the inch.

#### FULL-FASHIONING KNITTING MACHINE.

The pioneer full-fashioning mills in this country started with 27 and 30 gauge machines. Later they advanced to a 33-gauge machine (22 needles to 1 inch), which is principally used to-day. The full-fashioning knitting machine to-day is made in all gauges from 27 to 48 (18 to 32 needles to 1 inch). The best grades of silk hosiery are made on a 42-gauge (28 needles to 1 inch) machine. It is a multiple-head spring-needle machine generally of 18 or 20 sections, each section knitting one stocking. The leg is knit on a legging machine, usually

of 18 sections and 14 inches wide, and the foot on a footing machine, usually of 20 sections and 11 inches wide. The first full-fashioning machine made in America was introduced in 1898. The American full-fashioning machine is built on the Cotton-type principle, and originally was a redesigned form of the foreign machine. Constant experimenting, however, has resulted in there now being on the market a distinctive American machine, which is much simpler in construction than the foreign make. It has a greater production than the foreign machine, makes just as good a fabric and better selvage, and has less narrowing trouble, the foreign machine being affected by either too warm or too cold weather. The machine will knit from large out sizes to infant socks.

#### FLAT SEAMLESS KNITTING MACHINE.

There is another type of seamless knitting machine which knits a circular web on a flat machine. The machine has two parallel sets of needles, about 7 needles to the inch, and is used principally for heavy woolen hosiery. This machine is not fully automatic as to yarn changes, and though it is speedier than a machine of the Cotton type when actually knitting it requires more time to make the fashioning. This machine is seldom used in hosiery mills, its principal use being in State institutions, asylums, orphanages, etc.

#### RIBBING MACHINE.

The ribbing machine for seamless hosiery has latch needles and is circular, and of all diameters from  $1\frac{1}{2}$  to 5 inches. It makes any kind of a rib, one and one, two and two, one and three, etc., and usually has but one feed, because if the rib is defective it can be raveled back and the yarn used over again. The machine automatically cuts off the rib. There are some machines with two feeds, which change from a plain ribbed to a tuck stitch, but a one-feed machine is preferred where a continuous string of ribbed tops is desired. The ribbing machine is used for knitting the ribbed tops for men's half hose and the complete legs for boys' and misses' stockings. The ribbing machine for men's half hose has the same number of needles as the machine which knits the remainder of the stocking. The machine which knits the ribbed legs for children's hose usually has 9 or 10 needles to the inch.

#### RECENT IMPROVEMENTS IN SEAMLESS MACHINERY.

A remarkable recent invention, which is a radical departure from the principle that seamless machines must be of the latch-needle type, is the new spring-needle, circular machine for knitting seamless hosiery. This machine is intended to produce a fabric similar to full-fashioned hosiery, at the same time maintaining the production of the seamless circular machine of the latch-needle type. The machine is full automatic, has six yarn changes, and is made in all diameters and in all gauges up to about 288 needles. It is practically the same as the latch-needle machine except that it has a presser to close the beards of the spring needle. The manufacturer of this machine claims that it will produce at least the same quantity of hosiery as the latch needle, if not more. Some of the advantages that he claims for this machine are as follows:

This spring needle, unlike the latch needle, will not tear the yarn and give the finished stocking a fuzzy appearance, as often occurs in seamless latch-needle hosiery. This machine knits a more elastic stocking. It knits tighter at the ankle, because it takes less yarn to form the loop. Where the transferring of a ribbed top is required, this machine stops with all the needles level, so that time of transferring is saved, and only one turn by hand is required to start the machine, whereas the latch-needle machine requires a turn to bring the needles level, and after transferring requires the placing of the thread in a given needle, and then two turns by hand before the machine becomes automatic. In this machine the thread is hooked under a clamp, and it is claimed that the machine will always pick up the thread after transferring, whereas the latch-needle machine does not, resulting often in a small hole where the ribbed top joins the remainder of the stocking.

With an eye ever to increase production, to do away with the use of skilled labor, and to produce a better fabric, American manufacturers have in the last few years produced a great variety of seamless-hosiery knitting machines.

The problem in manufacturing ladies' stockings is to have a wide leg and a narrow ankle and foot. The difficulty with the seamless machine is that when the leg of a stocking knit on it is of the proper width, the ankle and foot are too wide, and when the ankle and foot are right the leg is too narrow. This difficulty has been remedied by an American manufacturer who has patented a machine which perfectly fashions ladies' seamless stockings. The machine is neither flat nor circular, though it resembles more strongly the flat-type machine. The only trouble with it is that it is a slow producer, and is at present too expensive for general use.

Another American machine manufacturer has a device for automatically knitting on a seamless machine an integral welt for ladies' hosiery.

Still another American manufacturer has a machine which knits the complete seamless stocking for men and women, without the necessity of transferring the ribbed portion, also doing away with the necessity of looping the toe. The machine is of the flat type and the yarn is drawn along much as it is on a full-fashioning machine. The machine is used for coarse work only, having from 84 to 108 needles. One boy can attend to 24 machines, but the initial cost of the machine is quite large.

One of the most remarkable of recent inventions is a machine to knit a complete stocking of the better kind for men from the top to the toe without the necessity of transferring the ribbed portion. The rib is not quite as elastic as the rib made on the special ribbing machine, but this machine, which is adapted to all gauges, makes a very handsome hose and reduces materially the cost of knitting the ribbed top part.

The old-style ribbed top was transferred on a cylinder which had to be removed from the machine. This has been done away with by the introduction of what is known as a quill ring, which has the same number of steel quills as there are needles in the circumference of the machine. The rib is transferred to the quill ring, which is then pressed down on the cylinder needles, after which the quill ring is removed and the machine is ready to knit the remainder of the stocking.

## LOOPER.

The first looping machine was made by Nelson & Co., of Nottingham, England, in 1868. Shortly afterwards one of these machines was imported by Campbell & Clute, of Cohoes, N. Y., and was used for underwear. In 1878 Beattie made the first looper successfully used for hosiery, which was tried out at the Ipswich Mills, Ipswich, Mass.

Up to December 5, 1911, there was no American two-thread looper. The two-thread looper came into demand because it made a more elastic and stronger stitch, which the boarders could not break as easily as they did the stitch made by the single-thread machine. The wearer also could not break it as easily as he did the stitch made by the single-thread machine.

The Germans had the first two-thread looper, which they introduced about 5 years before the first American machine of the same kind appeared on the market. The German machine was also equipped with a trimming attachment.

The recent American looper is simple in construction, there being no cams or springs, and the old-style single-thread stitch machine is easily converted into a two-thread machine by adding the new attachment. The looper is in the form of a circular plate, about 18 inches in diameter, and with any number of needles or points to the inch, as desired, though usually there are from 14 to 22 points to 1 inch.

## BOARDING MACHINE.

One of the most important inventions as regards the doing away with skilled labor is the new boarding machine. It has aluminum feet, in upright positions, which travel continuously around the machine. As each foot passes the boarder, he stretches on a stocking, which then passes through a steam chamber. After coming out the aluminum foot folds over, and four small cylinderlike fingers take hold of the stocking at the toe and heel and strip it; that is, take it off the board and place it on an extension of the machine. The stockings are piled up in half dozens or dozens, one on top of another, and when the required number are folded the platform moves them away to make room for a new pile.

The advantages claimed for this machine over the hand boarding are many. It does away with inaccurate sizing caused by the wooden boards shrinking from their proper size. It does away with imperfect stripping. Stripping is the difficult part of boarding, requiring much skill, for the heat burns the hands of the boarder. The machine strips the stockings one at a time, which is necessary for a good appearing hose. The hand boarder, however, working usually by the piece, pulls off three or four at a time, resulting in a poor appearing stocking. The machine also boards a considerably larger amount of goods. In one factory where this machine has been installed 6 men with 2 machines are doing the work that 20 men formerly did without this machine. The machine also saves the time required in counting the hosiery. The great advantage of this machine, however, is that it requires no skilled help whatever, whereas hand boarding does require much skill.

## COST OF MACHINERY.

The following table shows the approximate cost in the United States of the principal machines employed in manufacturing hosiery:

TABLE 64.—DESCRIPTION AND COST OF PRINCIPAL MACHINERY EMPLOYED IN MANUFACTURING HOSIERY.

Kinds of machinery.	Description.	Number of needles.	Cylinder diameter.	Price.	Usual selling terms.
Knitting, seamless...	Full automatic 5-yarn change.	Up to 200.....	Inches. 3½ or 3¾	\$200	2/10, net 30 days.
		201 to 220.....	3½ or 3¾	210	Do.
	Full automatic; integral welt or selvaged top; no transfer of ribs for half hose; automatically cuts off stocking.	221 to 240.....	3½ or 3¾	220	Do.
		Up to 200.....	3½ or 3¾	240	Do.
Knitting, full fashioned.	Split foot ladies' or half hose with high splice.	201 to 220.....	3½ or 3¾	250	Do.
		221 to 240.....	3½ or 3¾	260	Do.
	Domestic.....	Any number.....		255	2/10.
				2,500	
Seamless ribbed tops.	Imported (present tariff).....			3,300	
	Half hose.....		3½ to 6	110-110	2 per cent cash, net 60 days.
Looper.....	Ribbed legs.....		3½ to 6	115	Do.
	Domestic (2 thread or single).....	Any number of points per inch.		55-65	

## LOSSES FROM ANTIQUATED MACHINERY.

As hosiery machinery, especially that for making seamless hosiery, has been very greatly improved by numerous inventions in recent years, it is easy to understand why many manufacturers at the present time complain of the poor condition of the industry and of the too keen competition. It appears that many of those whose business has fallen off are using machines which are antiquated as compared with the highly developed machines of to-day. These manufacturers were slow to take advantage of the improvements in machinery or, as happened in most cases, they did not think that the investment in this new machinery was warranted. They have been and are using machines of less production, fewer labor-saving devices, and, worst of all, machines of much fewer yarn changes than the progressive manufacturers are using. It requires no great ability to realize that a manufacturer employing the old type of machine can not hope to compete with the manufacturer using up-to-date machinery.

This is illustrated by taking the case of a manufacturer who uses a two-yarn change machine and one who employs a five or six yarn change machine. The manufacturer who uses the former machine can use only two different yarns in the production of a particular stocking. The manufacturer using the latter machine to produce hosiery of the same price can employ five or six different yarns in the production of the stocking. He can put in cheap, heavy yarn where the wear is greatest, can use fine yarns where the appearance of the stocking requires it, and in various ways he can manipulate five or six different yarns so as to produce the best appearing and at the same time strongest stocking. The manufacturer who uses two-change yarn machines to make a stocking as fine as this in appearance must

use practically all fine yarns, and consequently he can not afford to sell it at the price that the former does, as his yarn cost is much higher. Should he use somewhat cheaper yarns so as to be enabled to sell at that price, his stocking is poorer in appearance. If he tries to make a strong stocking, he must use practically all heavy yarns, which make a coarse, ugly stocking, for which at the present time there is very little demand.

This largely accounts for the too keen competition of which much is heard. The manufacturer who uses the old-type machine, unable to sell his coarse, heavy hosiery in competition with hosiery made on an up-to-date machine, has to cut his price, and this forces other manufacturers to cut their prices. To manufacture profitably manufacturers must keep pace with the industry's machinery. A complaint frequently heard from manufacturers of seamless hosiery is that all of their profits go into new machinery. Many have suddenly realized that if they are to remain in the business they must equip their plants with up-to-date machinery, which should have been installed gradually and the payment for which should have been met out of a depreciation reserve. Working with old machinery led to the erroneous practice of charging no depreciation, or at most a very small depreciation, so that when new machinery was purchased it had to be paid for out of the surplus or capital of the business instead of being taken care of by a depreciation reserve.

As shown by Table 19, on page 50, the total amount of capital employed in the business of the 73 establishments that reported in this investigation was \$15,548,885, or an average of \$212,998 per establishment. The inventory of machinery and fixtures belonging to these 73 establishments amounted to \$5,519,368, or an average of \$75,608, which is 35.50 per cent of the average capital employed in the business.

Table 65 shows by groups the inventoried value of the machinery and fixtures used by the 73 establishments and the value of the machinery and fixtures bought by them during their last business year.

TABLE 65.—NUMBER OF ESTABLISHMENTS BUYING NEW MACHINERY AND FIXTURES, AVERAGE INVENTORY, AND AVERAGE AMOUNT AND PER CENT OF MACHINERY AND FIXTURES PURCHASED DURING THE YEAR, BY GROUPS OF ESTABLISHMENTS.

Mills making—	Groups.	Establishments.		Average inventory of machinery and fixtures at end of year.	Machinery and fixtures purchased during year.	
		In group.	Buying machinery and fixtures during year.		Average amount.	Per cent of inventory.
Full-fashioned or both full-fashioned and seamless hosiery (East and West).	I.....	9	3	\$256,215	\$5,690	2.29
Seamless cotton hosiery (Pennsylvania and New York).	II.....	16	5	40,372	1,365	3.38
Seamless cotton hosiery (South).	III.....	16	6	58,081	1,874	3.23
Seamless hosiery of cotton and silk (Pennsylvania).	IV.....	11	3	44,155	3,226	7.31
Seamless hosiery of cotton and silk (West).	V.....	9	6	51,111	6,519	12.75
Seamless hosiery of wool and cotton mixed (East, West, and South).	VI.....	4	1	71,135	38	0.05
Seamless hosiery and spinning yarns (East and West).	VII.....	8	6	50,993	4,082	8.01
All groups.....		73	30	75,608	3,173	4.20



Of the 73 establishments, only 30 reported that they had bought new machinery and fixtures during their last business year. These 30 establishments bought new machinery and fixtures during the year to the amount of \$231,620.23, an average for the 73 establishments of \$3,172.88. This average of new machinery bought during the year is 4.20 per cent of \$75,607.78, the average of the inventory of machinery and fixtures at the end of the year, as shown by the table.

As will be seen in a section of this report headed "Capital, profit, and turnover," depreciation on the machinery and fixtures was figured at 5 per cent for mills producing full-fashioned hosiery and 10 per cent for mills producing seamless hosiery.

The use of antiquated machinery and the failure to keep machinery in a proper condition are causes of waste of material and of the production of seconds, which lead to manufacturing losses. The following is quoted from an editorial on how profits are affected by poor machinery or wasteful methods, published in *Knit Goods* for April-May, 1914:

One of the most serious problems that confronts the knitter is, according to the *Wool and Cotton Reporter*, the matter of waste, its cause, and the means by which it may be reduced. \* \* \*

Excessive waste may result from any one or a combination of causes, many of which may be eradicated with comparatively little effort, while others may be deep-seated and difficult to cure. In some instances it is due to an attempt to use antiquated machinery for certain apparently unimportant processes, or it may be due to lack of care on the part of the operative, or negligence relative to the proper cleaning of the machine. The latter item is not infrequently the cause of a large proportion of the seconds produced, which, had the machinery received proper attention, might have gone through as perfect goods, whereas, owing to the desire of the operative to turn off as large a quantity as possible, without regard to quality, a portion of the output must be sold at a reduced price.

Seconds are a very serious menace to the success of any manufacturing establishment and should be carefully guarded against. Each department head should see that the work leaves his department in a condition as nearly perfect as is possible, and that the waste made is the least that can be obtained with the materials used. It is sometimes due to the purchasing of inferior materials, rather than to any condition inside the mill, that an excess of seconds is made.

It is policy to purchase the best possible yarn obtainable that can be used profitably in the production of the goods. The arguments in favor of this are many and irrefutable. In spite of the relatively higher cost, it is true economy, as the waste in each department is much less than in the case of lower-grade yarn, and a considerable saving of expense is noted in the conversion of the high-grade material. In many cases where lack of profits has been shown in the yearly statement, examination of the methods in vogue in the mill will reveal that either one or both of the above-mentioned evils are prevalent; in fact, one is closely related to the other and in few instances is either encountered alone.

The methods to be used in overcoming these profit-destroying evils must vary with the circumstances surrounding each individual case, but may be generalized somewhat after this manner. Perfection of product may only be obtained by giving the operative proper materials and adequate machinery equipment. In addition to these, there must be inculcated in the mind of each worker the necessity of keeping the machinery in his or her charge in as perfect condition as possible, and maintaining a high standard of excellence in the production of the machine, even if the rate of output is somewhat diminished thereby. Profits are the result of selling practically perfect goods at the predetermined price and never come as the result of merchandising seconds and waste.

The following paragraph, quoted from *Knit Goods* for May, 1915, indicates that American manufacturers of knit goods have recently increased their purchase of machinery:

In preparation for keen domestic competition, and for still keener European competition at the close of the war, American manufacturers of knit goods are making every effort to modernize their plants by the installation of the latest and most efficient

machinery. As a result, the makers of machinery and the representatives of foreign manufacturers report a considerably greater volume of business. In Philadelphia, Boston, and other manufacturing centers there is renewed activity in the production of mill equipment of all sorts, and buyers are insisting on prompt delivery.

Table 66 shows, by groups of establishments, the average number of machines in use, compiled from data obtained from all of the hosiery mills reporting in this investigation:

TABLE 66.—KINDS AND AVERAGE NUMBER OF MACHINES USED, BY GROUPS OF ESTABLISHMENTS.

Mills making—	Groups.	Estab- lish- ments.	Machines at end of the year.					
			Knitting.		Ribbing.		Loop- ing.	Sew- ing.
			Circu- lar.	Flat.	Circu- lar.	Flat.		
Full-fashioned or both full-fashioned and seamless hosiery (East and West).....	I.....	9	307.9	<sup>a</sup> 73.2	62.3	3.3	55.2	42.7
Seamless cotton hosiery (Pennsylvania and New York).....	II.....	16	177.9	0	35.4	0	24.8	5.3
Seamless cotton hosiery (South)....	III.....	16	204.8	0	80.8	0	35.4	4.6
Seamless hosiery of cotton and silk (Pennsylvania).....	IV.....	11	241.0	0	51.5	0	34.6	6.2
Seamless hosiery of cotton and silk (West).....	V.....	9	193.6	0	49.1	0	34.6	3.0
Seamless hosiery of wool and cotton mixed (East, West, and South)....	VI.....	4	260.8	0	90.3	0	78.5	6.5
Seamless hosiery, and spinning yarns (East and West).....	VII.....	8	242.3	<sup>b</sup> 6.0	100.5	.3	58.1	6.8
All groups.....		73	222.9	9.7	62.9	.4	40.2	9.8

<sup>a</sup> Some of the mills knitting full-fashioned hosiery had some circular machines on which seamless hosiery was made.

<sup>b</sup> There were a few flat machines in the mills in this group.

#### MACHINE GAUGES AND YARN COUNTS.

##### NEEDLE SPACING.

The fineness of hosiery depends upon the number of needles to the knitting machine or the needle spacing. Obviously a machine with 20 needles to the inch will knit a finer stocking than a machine with 14 needles to the inch.

Unfortunately different manufacturers use different methods of measuring their machines. Although the accepted method of measurement of circular machines for knitting seamless hosiery is taken from the outside of the diameter of the cam surface of the needle cylinder, and not from back to back of needles, there are many manufacturers whose measurements are based on the inside diameter.

In describing circular machines the figures "3 $\frac{3}{4}$ -220," for instance, mean that the diameter of the needle cylinder is 3 $\frac{3}{4}$  inches and that there are 220 needles in the circumference of the cylinder.

On a circular latched needle machine the cuts equal the needle spaces, measured on the circumference of the cylinder. The word "cut" is used instead of needles per inch to save confusion. A 12-cut machine has 12 grooves per inch on the outside cylinder circumference (though some machines have the grooves on the inside), and there is a needle in each of the cuts or grooves.



In describing full-fashioned machines, which are flat, the expression "24 needles to the inch," for instance, is to be taken literally.

On straight or flat latched needle machines the gauge is usually the number of needles to the inch, but in a spring-needle flat-type machine it is necessary to multiply the gauge by  $\frac{3}{2}$ —that is, a 27 gauge, for instance, would equal 18 needles per inch. This results from the old knitting frame having two needles cast together with lead, and a gauge of 3 inches in length being used. Gauge is important because it decides to a more or less degree the count of yarn that can be worked successfully upon a machine.

The English gauge equals the number of two-needle leads in 3 inches. The French gauge gros (up to No. 27) equals the number of two-needle leads in 3 French inches, and the gauge fin (from No. 20 up) equals the number of three-needle leads in 3 French inches. The German gauge equals the number of needles to the Saxon inch. The French inch equals 1.0936 English inches and the Saxon inch equals 0.9291 of an English inch. Therefore a No. 24 gauge would equal—

	Needles to an English inch.
English.....	16
French gros.....	14.63
French fin.....	21.95
Saxon.....	25.83

The German gauges run from 24 to 51, those most frequently used being 30, 33, 36, and 39 (Saxon figures). The English gauges most frequently used are 24 and 27 (English system).<sup>a</sup>

#### YARN COUNTS.

There are two standards of cotton counts, the constant weight system and the constant length system.<sup>b</sup>

The constant weight system arbitrarily accepts 840 yards (hank or skew) to 1 pound. In this system, therefore, the cotton count equals the number of yards in 1 pound divided by 840. As the yarn is finer the number increases. This is the system principally used for cotton yarns in hosiery manufacturing.

The constant length system is worked out differently. Assuming 50 yards as the unit of length, a yarn of which 50 yards weigh 1 grain is a 1-grain yarn. Then a yarn of which 50 yards weigh 2 grains is a 2-grain yarn. In this system the number of the yarn increases as the weight of the yarn increases.

Worsted, wool, and silk counts are usually in the first system. Worsted is based on 560 yards to the pound, wool on 1,600 yards to the pound, reeled silk on 520 yards to the pound, and spun silk the same as cotton, or 840 yards to the pound, except that no matter how many strands there are it is treated as a single yarn.

Care must be taken to distinguish between a two-ply thread and a two-thread yarn. A 50 two-ply thread means two 50s twisted together into a single yarn. A two-thread yarn means two threads used as one, as, for example, in knitting a fabric it would be running two separate threads in each feed.

The English yarn count for cotton is 840 yards to the pound or hank, and for worsted 560 yards. The yarn count in Germany is generally the same as the English system for cotton. To a small

<sup>a</sup> W. A. Graham Clark's article on German knit goods, Daily Consular and Trade Reports, July 22, 1908.

<sup>b</sup> Ernest Tompkins: Science of Knitting, p. 187.

extent, however, the metric system of a thousand meters contained in 1,000 grains is used. The German worsted count is sometimes the same as the English count of 560 yards to the pound, and sometimes is the same as the English cotton count of 840 yards (768 meters) to the pound.

#### YARNS COMMONLY USED.

Cotton is used most extensively in the manufacture of hosiery.

Wool, the outer covering of the sheep, Cashmere goat, Angora goat, and Llama goat is used to a comparatively small extent and principally for lumbermen's and sportsmen's hosiery.

Pure reeled silk is used to a very limited extent. Spun silk—that is, spun from the waste of cocoons in reeling, or from broken cocoons and torn up silk fabrics—is used very extensively. Japan-spun silk contains about 18 per cent gum. European and Chinese silk contains about 24 per cent gum. Spun silk also contains a good deal of tin and lead, which is put into the silk to make it heavier in weight.

Artificial silk is generally made of wood pulp, and contains no silk whatever. It is more lustrous than reeled silk, but is not as strong or elastic and is affected by water. It is used extensively in medium-priced hosiery.

Lisle is a two-fold cotton yarn, individual threads being spun with a right-and-left hand twist respectively and afterwards doubled together, resulting in a firm, hard-wearing yarn. It is used extensively.

Mercerized yarn is a cotton yarn subjected to a mechanical and chemical treatment, which causes the cotton fiber to resume its original tubular form, resulting in a fiber of greater luster and greater affinity for dyestuffs. This treatment of cotton to similarize silk was, in 1844, successfully tried by John Mercer, of Manchester, England, and yarn so treated has since been called mercerized yarn, though it appears that the Germans knew of this treatment before Mercer did. When the yarn is mercerized it usually has a fuzzy appearance. In order to remove this fuzz the yarn is often gassed, which results in a smooth, fine appearing yarn. Mercerized yarns are used very extensively.

Following are abbreviations of the names of the cotton yarns reported to have been used by all the mills visited during this investigation:

K. P.....	Carded peeler.
C. P.....	Combed peeler.
S. K. P.....	Southern carded peeler.
E. K. P.....	Eastern carded peeler.
S. C. P.....	Southern combed peeler.
E. C.....	Eastern combed.
E. C. P.....	Eastern combed peeler.
C. Eg.....	Combed Egyptian.
S. I.....	Sea island.
C. S. I.....	Combed sea island.

Peeler is a term commonly used for describing cotton grown in the United States. Southern carded peeler is yarn spun in southern mills, and eastern carded peeler is spun in New England. Combed cotton is that from which the short fibers have been removed after they have been carded. Egyptian cotton has a longer staple than southern cotton and is straw colored. Sea-island cotton is white and is grown on the South Atlantic coast. It has a longer staple than even Egyptian cotton and is used for spinning the finest yarns.

For seamless hosiery New England uses all numbers of cotton yarns from 14/1 E. K. P. to 30/1 E. K. P. Much merino and worsted and a little woolen yarn is used. The merino numbers used vary from 34/2s to 100 grain merino. The worsted yarns used show a predominance of 40/1s with various percentages of one-half blood.

In manufacturing seamless hosiery, the East (New York and Pennsylvania) uses all numbers of cotton yarns from 10/1 S. K. P. to 50s, and some few numbers above 50s, as high as 80s, mostly E. C. Ps. A great amount of all kinds of silk, especially Japan, is used, as well as artificial silk (denier 130), mercerized yarns, and a small amount of C. Eg.

For seamless hosiery the West uses all numbers from 7/1s E. K. P. to 100s. There is a predominance of 30/1s of C. S. I. and Egyptian, both plain and mercerized. All kinds of silk are used, especially Japan. This is the only section of the country that as a whole uses as high as 120 and 150 S. I. yarn. A small amount of artificial silk of denier 150 is used and a very small amount of merino.

The South uses all numbers from 7/1s to 60s, generally S. K. P.

In manufacturing full-fashioned hosiery the East generally uses the higher numbers of E. C. P. and mercerized yarns from 44/1s to 80/2s. Some Egyptian lises, that of about 78/2s and C. S. Is. from 40 to 100/2s are used to some extent. Also a large amount of silk is used, usually Jap tram.

New England uses for full-fashioned hosiery a little E. C. P., but generally Japan silk of different varieties such as best No. 1 extra, best No. 1, best doubled, best doubled extra, etc. A small amount of S. I. and merino and worsted is used. The merinos used are usually from 35/1s to 50/1s, and the worsted from 40/1s to 45/1s.

The West uses for full-fashioned hosiery a small amount of 20/1s E. C. Ps., most of this kind of yarn running from 40s to 80s. Both plain and mercerized C. Eg. and C. S. I. are used to some extent. A little E. C. P. above 100 and up to 120 is used.

No full-fashioning mills were reported from the South.

Germany, which makes full-fashioned hosiery almost entirely, uses the following yarn counts: All numbers from 10s to 32s, with a few above 32s as high as 100 and a very few at 200. Most of the yarns used are cotton and usually are single, though there is some small amount of double yarns used. Woolen yarns are also used to a very small extent.<sup>a</sup>

#### MANUFACTURING PROCESSES.

Following is a description of the principal hosiery processes given in the order in which they are usually performed in the mill. Some mills manufacturing different classes of goods or using special machines have a different sequence of operations. Some operations are combined in certain mills, but the following is the order in which the operations are generally performed. Turning has been left out of the description, and examining is only noted once, though some mills have three or four inspections at various stages of the work. The production given at the end of each operation is to be taken in its broadest term. The amount of production depends upon the number of working hours, the number of machines attended by one

<sup>a</sup> W. A. Graham Clark's article on German knit goods, Daily Consular and Trade Reports, July 22, 1908.

or more persons, the skill of the operator, the good or bad running of the yarn, the kind of goods produced, and other factors. The production, then, is to be taken as a general indication rather than as any definite specific amount.

#### WINDING.

This operation consists of winding the yarn onto winder bobbins, to prepare the yarn for the knitting machine. The large hosiery mill usually winds its own yarn, but smaller mills generally purchase wound yarn. Poor grades of hosiery are knit from the cop or jack bobbin, which is the usual form in which the yarn comes from the yarn mill. Winding is essential where a good product is desired, the wound yarn being more free of knots and the weak places having been revealed and corrected. A rewound bobbin insures a correct amount of yarn fed at the proper tension to the knitting machine, but if the yarn is not wound uniformly it is liable to kink and break. Winding saves much of the time and labor of the knitter, reduces the number of seconds, and saves broken needles and other annoyances.

One woman can attend to one machine of from 18 to 24 bobbins.

#### RIBBING.

In knitting men's half hose or children's stockings, either seamless or full fashioned, the ribbed portion is knit first on a ribbing machine. The rib may be of various kinds, depending upon the desired top and on the machine used. The rib for men's half hose is the top or welt, usually about 3 or 4 inches in length, whereas in children's hose the rib top continues down to the heel. The ribbed tops are knitted in the form of a cylinder or tube and come out of the machine in a continuous string, with dropped stitches at the proper intervals indicating where the rib is to be cut. The rib is cut either automatically by the machine itself or by hand, the better grade of goods usually employing the latter method, though it is much slower.

The ribbed tops for seamless hosiery are always knit on a circular latch-needle machine and those for full-fashioned hosiery usually on a flat spring-needle machine.

*Seamless.*—One girl can attend to 12 machines knitting children's ribbed tops, with a production of from 36 to 42 dozen per day, or 15 machines knitting ribbed tops for men's half hose, with a production of about 225 dozen per day.

*Full fashioned.*—One man and a boy helper working on one 32-section machine will knit about 140 dozen ribs per day.

*Rib cutting.*—A girl by hand can cut from 80 to 110 dozen ribs and by machine 2,000 to 2,500 dozen ribs per day.

#### TRANSFERRING OR TOPPING.

The ribbed welt of the men's half hose or the ribbed leg of the children's stocking is now transferred onto the knitting machine, usually designated as a footer, which knits the remainder of the leg and foot of the men's hose or the foot of the children's stockings.

The transferring in the case of seamless hosiery is done by means of a quill ring containing the same number of steel quills as the foot-

ing machine has needles. The rib is transferred by hand to the quill ring, which is then pressed down with the quills in their proper places on the footer needles, after which the quill ring is removed. Transferring children's ribbed legs, though done in the same way as men's half hose, requires more skill. Here the entire leg, not a portion of the leg, must be transferred.

There are more stitches in the ribbed leg portion than in the foot. The leg may have been knit on a 220-needle machine, the foot on a 160-needle machine. In transferring, then, 60 stitches have to be disposed of. This requires doubling up, putting two stitches of the ribbed leg on one stitch of the foot.

In full-fashioned half hose the transferring or running on is done by means of a straight transfer bar, which contains the same number of points as the needles contained in one section of the knitting machine, but always less than the number of needles in the ribbing machine, so as to permit doubling up. The bar will hold eight or nine ribs, which the knitter takes off as he needs.

*Seamless.*—One girl will transfer 8 to 12 dozen children's tops or about 20 to 25 dozen half hose per day.

*Full fashioned.*—One girl will transfer an average of about 22 to 40 dozen half hose per day.

#### KNITTING.

In the case of seamless hosiery, the knitting machine, which has had the ribbed top or leg transferred to it, automatically knits the remainder of the stocking. The machine is circular, and knits the leg below the rib top to the toe or the foot alone, depending upon whether it is a half hose or children's stocking. Ladies' seamless hosiery requires no transferring, the entire stocking being knit on the one machine. In every case, however, the machine leaves only the toe open. In knitting the leg the machine goes all the way round. When the heel is reached the machine has a reciprocating motion, going half way round and then back again. In knitting the foot the machine goes all the way round again.

In knitting a high splice or a double or triple sole there remains inside the stocking a floating thread. The machine, in knitting the high splice and foot, goes all the way round, so as to prevent a double thickness; for example, on the top of the foot the extra yarns are only carried halfway round, at which point they are then thrown out.

In the case of full-fashioned hose, the ribbed top having been transferred to a flat legging machine, the machine knits the remainder of the leg down to and including the open heel. In ladies' stockings the knitting machine knits from the very top to and including the open heel. Up to the point where the splicing is inserted the full-fashioned legger has but one carrier. At the point where the splicing is inserted the yarn is slackened, so that the double thickness will not be too stiff. Two extra carriers are brought in, the main carrier going straight across, and the high splicing carriers, one on each side, traveling just the proper distance for the splicing and then going back. When the heel is reached a fourth carrier is brought in, which takes the place of the main carrier, which is now held to knit the right-hand heel. Both men's and ladies' hosiery must then be transferred by means of a transfer bar

onto a specially constructed footing machine which knits the foot. Unlike the seamless, the full-fashioned knitting machine leaves the heel open as well as the toe. In knitting the foot the splicing is continued up to the beginning of the toe, one main and two splicing yarn carriers being employed. At the beginning of the toe the narrowing commences, only one main and one splice carrier going all way across.

Children's full-fashioned hosiery is made only to a limited extent in the United States, but where such a product is desired the ribbed leg is usually knit on a circular latch-needle machine.

*Seamless.*—One girl attending 4 men's half-hose machines will knit about 20 dozen per day. One girl attending 10 ladies' stocking machines will knit about 30 dozen per day.

*Full fashioned.*—One man and boy on a 20-section half-hose legging machine will knit about 40 dozen per day, and on two 20-section ladies' legging machines will knit about 24 dozen per day.

One man and boy on one 20-section footing machine will knit about 40 dozen per day.

#### WELTING.

Welting is done only on ladies' hosiery. In seamless hosiery the top of the hose is doubled back to the desired length by hand or by devices designed by the various manufacturers, and then put on a special sewing machine of high speed, known as a welter. This machine sews the welt with an overlock stitch, trimming as it sews. It makes a strong, fine-appearing finished seam that prevents the welt from raveling back.

In full-fashioned hosiery a machine knits the leg of the stocking, and when the desired length is reached, about 8 or 10 inches, the machine is stopped, the knit fabric is doubled, and the machine then continues to knit the remainder of the leg. Some machines knit the welt as a part of the stocking, the welt made by such a machine being designated as an integral welt. Integral welts are usually found only in full-fashioned hosiery.

*Seamless.*—One girl using one welting machine will welt about 50 dozen stockings per day.

#### LOOPING OR JOINING.

Looping seamless hosiery consists of closing the open edges of the toe, and in full-fashioned hosiery closing the open edges of both the heel and the toe. The looper is a circular machine, with points or needles projecting from a dial. The dial revolves continuously at a slow rate of speed. As it does so the top of the toe is run on first by hand, then the corresponding exactly opposite loops of the bottom of the toe are placed on the same points. The stocking passes a small blade attached to the machine which cuts away any unnecessary cloth and leaves the cut surface clean. As the stocking passes the back of the machine a needle passes through the proper double sets of loops, fastening the open edges together. A guide keeps the thread from breaking by holding it in the same place as the machine revolves.

In full-fashioned hosiery, in addition to the toes, the heels must also be looped. The looping is done in the same way and on the same kind of machine as is used for seamless hosiery.

A girl working on one looping machine will loop from 25 to 50 dozen toes or 18 to 30 dozen toes and heels per day.



## SEAMING.

After a full-fashioned stocking has been looped it is sent to the seamer. The stocking is seamed from the end of the toe down the sole of the foot and up the back of the leg to the top of the welt, leaving a small portion open at the beginning of the welt to make it more elastic. The stocking is seamed on the inside with a lock stitch and is so seamed that a proper selvage is obtained.

A girl on one seaming machine will seam from 15 to 28 dozen stockings per day.

## INSPECTING OR EXAMINING AND MENDING.

Stockings are now sent to inspectors, who stretch them over a form and examine them for defects caused by bad needles, dropped stitches, etc., and who cut the floating threads. If the defect is slight, the stocking is sent to a mender. In this mending in the rough, as it is called, the hose is stretched over a board shaped like a leg and foot and the mender corrects by hand what defects she can, using a needle and thread. If, however, the stockings after mending are not good enough for first quality goods, they are sold as seconds or are discarded.

A girl by hand will cut 100 to 170 dozen and by machine 300 dozen floating threads per day.

A girl who examines only can inspect from 75 to 150 dozen per day.

A girl who mends only can correct about 15 to 30 dozen per day.

## DYEING.

The stocking being completely finished as regards knitting and sewing is then bleached or dyed. Usually this work is done by outside houses, though some few large manufacturers maintain their own dyeing plants. Where ingrain yarns have been used, the yarn being dyed the desired color before the stocking was knit, no dyeing is required. Ingrain yarns are seldom used except in very good silk, because of the difficulty in handling colored yarns, especially black. When such yarns are used, the work is slow; it is a strain on the eyes of the operators, and costs more, so that most manufacturers knit in the white and dye the desired color after the stocking has been knit.

## BOARDING.

From the dyer the hosiery comes to the boarder in a damp condition. If the stocking has been knit from an ingrain yarn, it is put in a wet linen cloth to dampen it before it is boarded. Though not entirely essential, damp hosiery is always desired, as in that state it makes shaping and stretching easier. The boarder draws, by hand, the damp hose smooth over boards shaped to the outline of the foot and leg.

Boarding is very important in seamless hosiery, for, the hose not being knit to shape or actual size, the boarding really determines the shape and size. In full-fashioned hosiery boarding is used to bring out the shape better. Full-fashioned hosiery, unlike seamless, is always boarded in pairs, and the stocking is put on the board so that the seams are a little inside, in order not to be seen.

The leg part of children's stockings, no shaping being required, is stretched over a straight board.

The stockings having been stretched over boards, the boards are put in racks, and the racks placed in a hot box or drying kiln to dry. The dry box contains steam coils under a pressure of about 80 pounds, producing a temperature varying around 190°. The length of time the stockings are permitted to remain in the hot box depends upon the kind of stockings and the weight of the goods. From two to seven minutes is the usual time.

*Seamless.*—One man will board 100 to 140 dozen stockings per day.

*Full-fashioned.*—One man will board about 55 dozen half hose or 40 dozen ladies' hose per day.

## PRESSING.

This operation consists in pressing the hosiery to give it a smooth, finished appearance. The hosiery is placed flat between pressboards made of highly polished glazed pasteboards. Each set of pressboards will hold one dozen men's half hose or one-half dozen stockings. The sets are then placed, one on top of the other, in a hydraulic press. Around the press are pipes, through which steam is first passed from 5 to 15 minutes, after which cold water is run through the pipes for about an hour. The length of time that the steam and water are utilized depends upon the quality of the goods. The hosiery remains in the press about six hours, or overnight. The highly polished surface of the pressboards imparts a luster and fine finish to the stocking.

## PAIRING.

This consists of mating or matching the stockings in sets of two of a kind, and intended to be used together. In seamless hosiery there is no right and left, but the pairer matches two stockings of the same size and length, the stockings having been stretched to irregular lengths in boarding. In full-fashioned hosiery, there being a right and left, the pairer must pick out the proper right and left stockings of the various sizes. The pairer often inspects the finished stockings for defects.

A girl will pair from 150 to 250 dozen stockings per day.

## STAMPING.

After being paired the stocking is stamped. The trade-mark of the manufacturer or of the purchaser and the size are stamped on the stocking, gold leaf being used on good stockings or ink on cheap stockings.

One girl or boy can stamp from 700 to 900 dozen stockings per day.

## ORNAMENTING.

If any embroidery like clocking is to be put on, it is done after the stocking is finished and examined and before it is folded. The embroidery is usually put on by hand, with needle and thread. In ladies' full-fashioned hosiery, if beading is to be put on, it is done before seaming. The fabric must be stretched taut, as the beads are put on by a machine. This can not be done after the stocking has been seamed.

## FOLDING.

The folder puts on the bands and labels and folds the finished stockings to the size desired for packing in a box. Folding and pairing are often done by the same operator, who also examines the stockings and counts the dozens.

A girl can fold from 400 to 500 dozen stockings per day.



## BOXING.

The boxer packs the finished folded stockings in boxes, a half dozen or a dozen to the box, and ties the box.

A girl or boy can put from 700 to 900 dozen stockings into boxes per day.

## ORDER OF PROCESSES.

Tables 67 and 68 describe the processes of seamless and full-fashioned hosiery in the order in which they are usually performed in the mill. With each operation is given the machine used and designation of the operator. The distinction between man and boy and the term "women" are to be taken literally. Where the term "girl" is used it often includes women.

TABLE 67.—PROCESSES IN MANUFACTURING SEAMLESS HOSIERY, KINDS OF MACHINES USED, AND DESIGNATIONS OF OPERATORS.

Processes.	Handwork or kind of machine used.	Designation of occupation.	Usual operator.
Winding.....	Winding.....	Winder.....	Woman.
Ribbing.....	Ribber.....	Knitter.....	Girl.
Cutting ribs.....	Hand, shears, or machine.....	Rib cutter.....	Do.
Transferring or topping.....	Quill ring.....	Topper.....	Do.
Knitting.....	Knitting.....	Knitter.....	Do.
Welting.....	Welting.....	Welter.....	Do.
Looping.....	Looping.....	Looper.....	Do.
Turning.....	Hand.....	Turner.....	Do.
Cutting floating threads.....	Shears or special machine.....	Inspector.....	Do.
Examining.....	.....do.....	.....do.....	Do.
Mending.....	Needle and thread.....	Mender.....	Do.
Dyeing.....	.....	Dyer.....	Man.
Turning.....	Hand.....	Turner.....	Girl.
Boarding.....	Boards.....	Boarder.....	Man.
Pressing.....	Hydraulic press.....	Press hand.....	Do.
Pairing.....	Hand.....	Pairer.....	Man or woman.
Clocking.....	Needle and thread.....	Embroiderer.....	Girl.
Stamping.....	Stamp.....	Stamper.....	Girl or boy.
Folding.....	Hand.....	Folder.....	Girl.
Boxing.....	.....do.....	Boxer.....	Girl or boy.

TABLE 68.—PROCESSES IN MANUFACTURING FULL-FASHIONED HOSIERY, KINDS OF MACHINES USED, AND DESIGNATIONS OF OPERATORS.

Processes.	Handwork or kind of machine used.	Designation of occupation.	Usual operator.
Winding.....	Winding.....	Winder.....	Woman.
Ribbing.....	Ribber.....	Knitter.....	Man and boy
Rib cutting.....	Hand, shears, or machine.....	Rib cutter.....	helper.
Transferring or topping.....	Transfer bar.....	Topper.....	Girl.
Knitting (leg).....	Knitting (legger).....	Knitter.....	Do.
Transferring or topping.....	Transfer bar.....	Topper.....	Man and boy
Knitting (foot).....	Knitting (footer).....	Knitter.....	helper.
Welting.....	Welting or knitting.....	Welter or knitter.....	Girl or man.
Looping.....	Looping.....	Looper.....	Girl.
Beading.....	Beading.....	Beader.....	Do.
Seaming.....	Seaming.....	Seamer.....	Do.
Turning.....	Hand.....	Turner.....	Do.
Examining.....	.....	Inspector.....	Do.
Mending.....	Needle and thread.....	Mender.....	Do.
Dyeing.....	.....	Dyer.....	Man.
Boarding.....	Board.....	Boarder.....	Do.
Pressing.....	Hydraulic press.....	Presser.....	Do.
Pairing.....	Hand.....	Pairer.....	Man or woman.
Clocking.....	Needle and thread.....	Embroiderer.....	Girl.
Stamping.....	Stamp.....	Stamper.....	Do.
Folding.....	Hand.....	Folder.....	Girl or boy.
Boxing.....	.....do.....	Boxer.....	Girl.

## CHAPTER VI.

## WORKING CONDITIONS.

## EMPLOYEES.

Of the 73 establishments which manufacture hosiery and which supplied data for this investigation, 34 reported that there were no particularly dull months during the year. The reports of the other 39 establishments indicated that the busiest months were March and April, the dullest months July, August, and September.

The reports show that in their busy season the 73 establishments employed 4,620 males and 12,424 females, a total of 17,044 who were 16 years of age and over; and 466 males and 984 females, a total of 1,450 who were under 16 years of age. The whole number employed was 18,494, of whom the 1,450 that were under 16 years of age constituted 7.85 per cent.

The average number of employees per establishment reported by the 73 establishments is shown in Table 69, in which they are variously classified.

TABLE 69.—AVERAGE NUMBER OF EMPLOYEES PER ESTABLISHMENT IN ALL DEPARTMENTS, INCLUDING SUPERINTENDENTS, FOREMEN, CLERKS, AND GENERAL HELP, BY GROUPS OF ESTABLISHMENTS AND BY SEX, PIECE AND TIME WORKERS, DURING BUSY SEASON AND DULL SEASON.

Classification.	Groups.	Estab-lish-ments.	Total.			
			Busy season.		Dull season.	
			Male.	Fe-male.	Male.	Fe-male.
16 years of age and over:						
Mills making—						
Full-fashioned or both full-fashioned and seam- less hosiery (East and West).	I.....	9	199.2	411.3	195.0	398.9
Seamless cotton hosiery (Pennsylvania and New York).	II.....	16	25.5	86.3	25.0	82.1
Seamless cotton hosiery (South).....	III.....	16	49.6	158.2	47.6	150.9
Seamless hosiery of cotton and silk (Pennsyl- vania).	IV.....	11	28.4	139.8	26.7	134.5
Seamless hosiery of cotton and silk (West)....	V.....	9	33.2	138.8	32.1	136.0
Seamless hosiery of wool and cotton mixed (East, West, and South).	VI.....	4	51.0	129.3	51.0	129.3
Seamless hosiery and spinning yarns (East and West).	VII.....	8	101.5	188.2	96.5	175.1
Average.....			63.3	170.2	61.3	163.6
Under 16 years of age:						
Mills making—						
Full-fashioned or both full-fashioned and seam- less hosiery (East and West).	I.....	9	19.9	22.2	19.9	22.2
Seamless cotton hosiery (Pennsylvania and New York).	II.....	16	3.1	16.7	3.1	16.7
Seamless cotton hosiery (South).....	III.....	16	7.1	6.6	6.7	6.0
Seamless hosiery of cotton and silk (Pennsyl- vania).	IV.....	11	5.3	15.5	4.9	15.0
Seamless hosiery of cotton and silk (West)....	V.....	9	1.4	20.0	1.4	20.0
Seamless hosiery of wool and cotton mixed (East, West, and South).	VI.....	4	1.1	.3	1.1	.3
Seamless hosiery and spinning yarns (East and West).	VII.....	8	6.2	7.6	5.6	6.9
Average.....			6.4	13.5	6.2	13.2
Average, all ages.....			69.7	183.7	67.5	176.8

TABLE 69.—AVERAGE NUMBER OF EMPLOYEES PER ESTABLISHMENT IN ALL DEPARTMENTS, INCLUDING SUPERINTENDENTS, FOREMEN, CLERKS, AND GENERAL HELP, BY GROUPS OF ESTABLISHMENTS AND BY SEX, PIECE AND TIME WORKERS, DURING BUSY SEASON AND DULL SEASON—Continued.

Classification.	Pieceworkers.				Time workers.			
	Busy season.		Dull season.		Busy season.		Dull season.	
	Male.	Female.	Male.	Female.	Male.	Female.	Male.	Female.
16 years of age and over:								
Mills making—								
Full-fashioned or both full-fashioned and seamless hosiery (East and West).....	146.8	358.2	144.6	348.0	52.4	53.1	50.4	50.9
Seamless cotton hosiery (Pennsylvania and New York).....	14.1	75.9	13.6	74.3	11.4	10.4	11.4	7.8
Seamless cotton hosiery (South).....	30.7	144.9	29.2	138.1	18.9	13.3	18.4	12.8
Seamless hosiery of cotton and silk (Pennsylvania).....	11.3	126.3	10.3	122.1	17.1	13.5	16.4	12.4
Seamless hosiery of cotton and silk (West).....	15.2	114.8	15.1	112.0	18.0	24.0	17.0	24.0
Seamless hosiery of wool and cotton mixed (East, West, and South).....	34.0	124.8	34.0	124.8	17.0	4.5	17.0	4.5
Seamless hosiery and spinning yarns (East and West).....	45.4	164.1	43.5	153.5	56.1	24.1	53.0	21.6
Average.....	38.3	150.6	37.3	145.4	25.0	19.6	24.0	18.2
Under 16 years of age:								
Mills making—								
Full-fashioned or both full-fashioned and seamless hosiery (East and West).....	10.7	14.6	10.7	14.6	9.2	7.6	9.2	7.6
Seamless cotton hosiery (Pennsylvania and New York).....	1.6	14.1	1.6	14.1	1.5	2.6	1.5	2.6
Seamless cotton hosiery (South).....	3.9	5.8	3.8	5.3	3.2	.8	2.9	.7
Seamless hosiery of cotton and silk (Pennsylvania).....	4.0	13.5	3.6	13.3	1.3	2.0	1.3	1.7
Seamless hosiery of cotton and silk (West).....	1.2	17.1	1.2	17.1	.2	2.9	.2	2.9
Seamless hosiery of wool and cotton mixed (East, West, and South).....	.8	.0	.8	.0	.3	.3	.3	.3
Seamless hosiery and spinning yarns (East and West).....	2.9	7.6	2.6	6.9	3.3	.0	3.0	.0
Average.....	3.6	11.1	3.5	10.9	2.8	2.4	2.7	2.3
Average, all ages.....	41.9	161.7	40.8	156.3	27.8	22.0	26.7	20.5

As shown by the above statement, the average number of employees per establishment of all ages in all establishments during the busy season was: Males, 69.7; females, 183.7; total, 253.4. The average in the dull seasons was: Males, 67.5; females, 176.8; total, 244.3, a falling off of only 9.1 or 3.59 per cent.

Table 70 shows the average number of the employees per establishment that were reported as working in the busy season.

TABLE 70.—AVERAGE NUMBER OF EMPLOYEES PER ESTABLISHMENT DURING BUSY SEASON IN ALL DEPARTMENTS, INCLUDING SUPERINTENDENTS, FOREMEN, CLERKS, AND GENERAL HELP, BY GROUPS OF ESTABLISHMENTS, BY SEX, AND BY PIECE AND TIME WORKERS.

Piece and time workers, by age and sex.	All establishments reporting, Groups I to VII.	Establishments making—							
		Full-fashioned or full-fashioned and seamless (East and West), Group I.	Seamless cotton (Pennsylvania and New York), Group II.	Seamless cotton (South), Group III.	Seamless cotton and silk (Pennsylvania), Group IV.	Seamless cotton and silk (West), Group V.	Seamless wool and cotton mixtures (East, West, and South), Group VI.	Seamless mills spinning yarns (East and West), Group VII.	
Number of establishments.....	73	9	16	16	11	9	4	8	
16 years and over:									
Pieceworkers—									
Male.....	38.3	146.8	14.1	30.7	11.3	15.2	34.0	45.4	
Female.....	150.6	358.2	75.9	144.9	126.3	114.8	124.8	164.1	
Aggregate.....	188.9	505.0	90.0	175.6	137.6	130.0	158.8	209.5	
Time workers—									
Male.....	25.0	52.4	11.4	18.9	17.1	18.0	17.0	56.1	
Female.....	19.6	53.1	10.4	13.3	13.5	24.0	4.5	24.1	
Aggregate.....	44.6	105.5	21.8	32.2	30.6	42.0	21.5	80.2	
Total, 16 years and over.....	233.5	610.5	111.8	207.8	168.2	172.0	180.3	289.7	
Under 16 years:									
Pieceworkers—									
Male.....	3.6	10.7	1.6	3.9	4.0	1.2	.8	2.9	
Female.....	11.1	14.6	14.1	5.8	13.5	17.1	.....	7.6	
Aggregate.....	14.7	25.3	15.7	9.7	17.5	18.3	.8	10.5	
Time workers—									
Male.....	2.8	9.2	1.5	3.2	1.3	.2	.3	3.3	
Female.....	2.4	7.6	2.6	.8	2.0	2.9	.3	.....	
Aggregate.....	5.2	16.8	4.1	4.0	3.3	3.1	.6	3.3	
Total, under 16 years.....	19.9	42.1	19.8	13.7	20.8	21.4	1.4	13.8	
All ages:									
Pieceworkers—									
Male.....	41.9	157.5	15.7	34.6	15.3	16.4	34.8	48.3	
Female.....	161.7	372.8	90.0	150.7	139.8	131.9	124.8	171.7	
Aggregate.....	203.6	530.3	105.7	185.3	155.1	148.3	159.6	220.0	
Time workers—									
Male.....	27.8	61.6	12.9	22.1	18.4	18.2	17.3	59.4	
Female.....	22.0	60.7	13.0	14.1	15.5	26.9	4.8	24.1	
Aggregate.....	49.8	122.3	25.9	36.2	33.9	45.1	22.1	83.5	
Total, all workers.....	253.4	652.6	131.6	221.5	189.0	193.4	181.7	303.5	
Per cent under 16 years.....	7.85	6.45	15.05	6.19	11.01	11.07	0.77	4.55	

The establishments in Group I, which includes mills making full-fashioned hosiery, some of them also producing seamless hosiery, had a higher average number of employees than the establishments in any other group. The establishments in Group VII, which includes mills that spin some or all of their yarns, show the next largest average number of employees. Table 70 shows that in the 73 establishments the proportion of employees under 16 years of age was 7.85 per cent of the whole number.<sup>a</sup>

The lowest per cent of employees under 16 years of age is 0.77, found in Group VI, which includes mills making hosiery of wool, worsted, merino, or cotton mixed. Of the 4 mills in this group, 2 are in Illinois and 1 each in Pennsylvania and Maryland.

The next lowest per cent of employees under 16 years of age is 4.55, found in Group VII, which includes mills that spin some or all of their yarns. Of the 8 mills in this group, 4 are in New Hampshire and 1 each in Massachusetts, Rhode Island, Michigan, and Wisconsin.

The next lowest per cent of employees under 16 years of age is 6.19, found in Group III, which includes southern mills that make seamless hosiery. Of the 16 mills in this group, 6 are in Georgia, 4 in North Carolina, 3 in Maryland, and 1 each in South Carolina, Tennessee, and Missouri.

The next lowest per cent of employees under 16 years of age is 6.45, found in Group I, which includes mills that make full-fashioned hosiery. Of the 9 mills in this group, 5 are in Pennsylvania, and 1 each in Massachusetts, Rhode Island, New York, and Indiana.

#### WAGES AND HOURS OF LABOR.

Most of the labor in the manufacture of hosiery is paid for on the piece-price basis. The employees in the dye house are usually paid by the day, because the piece-price system can not well be applied to their work. In some mills winding is done by daywork, because the employers believe that the winders are more careful if paid by the day than if paid by the hundred pounds. Beginners in any occupation are often paid by the day instead of by the piece for a period of six months.

Both employers and employees generally prefer the piece-rate system, except for dye-house hands, winders, and beginners. Employers prefer it because they believe it causes greater efficiency and increased production; also because it enables them to figure costs easier than if payment is made by the day. Competent employees prefer the piece system because it makes each independent and because each receives what he or she earns, while under the day-work system the shirkers or slow workers are paid the same as the more efficient hands. While pieceworkers may not be so careful as dayworkers and therefore make more seconds, yet the percentage of seconds can be kept low by close supervision and inspection and by imposing fines for imperfect work.

For several years previous to 1914 there was a scarcity of labor in the hosiery industry. The scarcity has been so great that manufacturers have had to employ much inexperienced help, which

<sup>a</sup>This may be compared with 8.1 per cent shown in Table 11 (p. 22) in a section of this report headed "The hosiery and knit-goods industries," reproduced from the Thirteenth Census, Manufactures, Vol. X, p. 70. This 8.1 per cent was the percentage for the whole hosiery and knit-goods industry in the United States in 1909.

caused loss in waste and in inferior production; and when a manufacturer had trained his new employees to a certain efficiency, a competitor would offer them more money, and in order to hold them wages had to be increased. There has been a scarcity, especially of knitters on flat machines making full-fashioned hosiery. These operatives are always men, as the work is too heavy for women.

There has never been a sufficient supply of such knitters since this branch of the industry was started in the United States, and their earnings are higher than those of any other employees in a hosiery mill and perhaps higher than those of employees in any other occupation in any branch of the textile industry. Each of these knitters pays for a helper out of his own earnings. This helper is usually a boy, and as a rule he works for very small wages that he may learn what it is necessary for him to know in order to be a journeyman knitter. There is no contract work in the manufacture of either hosiery or knit underwear.

Females constitute a large proportion of the employees in hosiery mills. Because of this fact, and possibly also because many of the employees are foreigners recently immigrated to this country, few of the employees are unionized. The knitters on flat machines and the boarders in hosiery mills are all men and have labor unions. In some localities the employees in the industry are organized locally.

Manufacturers north of Mason and Dixon's line complain that the rapid development of the hosiery industry in the South is making serious inroads on their business, and that it is hard for them to meet the competition of the southern mills, because in these mills wages are lower, working hours longer, and younger children employed than in northern factories, and workmen's compensation acts have not been passed in Southern States.

At the annual convention of the National Association of Hosiery and Underwear Manufacturers held in Philadelphia, Pa., May 4 to 6, 1915, the board of directors made a report in part as follows:

The association committees and activities of members took an advanced position during the year in combating proposed legislation inimical to the interests of industry and labor and urging the enactment of laws tending toward the betterment of conditions. Every appeal from individual or organized manufacturers received prompt attention, and the desires expressed in resolutions adopted at sectional meetings were carried out to the letter. Committees visited Harrisburg in antagonism to the child-labor bill, which, we regret, was passed finally and awaits the governor's signature. We congratulate ourselves, however, in having contributed to procuring in the Pennsylvania House of Representatives a substantial vote by which the bill for the repeal of the full-crew law was passed.

We are advised that manufacturers in New York have been more fortunate than those of Pennsylvania in protesting the enactment of a child-labor law calculated to impose unnecessary hardship on manufacturers and diminish the earnings of juveniles whose support their families frequently need.

The following preamble and resolution were adopted by this convention:

Whereas public opinion is at present considering the regulation by law of the hours of labor and working conditions of children and women workers, and we believe this to be a many-sided question that needs careful consideration: Therefore be it

*Resolved*, That it is the opinion of the National Association of Hosiery and Underwear Manufacturers in convention assembled that all legislation affecting manufacturers who compete with manufacturers in other States should have Federal rather than State origin, so that manufacturers everywhere may be placed on an equally competitive basis.



The information which follows regarding earnings and hours of labor has been condensed from a bulletin issued by the Bureau of Labor Statistics of the Department of Labor.<sup>a</sup>

In selecting establishments from which to secure data the Bureau of Labor Statistics undertook to represent all States in which hosiery and underwear manufacturing is of material importance, the measure of importance being the number of employees as reported by the United States Census of Manufacturers. The number of hosiery and knit-goods establishments in each State from which agents of the Bureau of Labor Statistics secured data regarding wages in 1914 and the number of employees in specified occupations working in these establishments are shown in Table 71.

TABLE 71.—HOSIERY AND KNIT UNDERWEAR ESTABLISHMENTS REPORTED.

States.	Em- ployees reported by United States census, 1910.	Establishments and employees for which data are shown by the Bureau of Labor Statistics for 1914.					
		Hosiery.		Knit underwear.		Total.	
		Estab- lish- ments.	Em- ployees.	Estab- lish- ments.	Em- ployees.	Estab- lish- ments.	Em- ployees.
Pennsylvania.....	38,206	11	5,837	4	1,554	15	7,391
New York.....	35,950	a 3	b 2,852	18	7,054	18	7,054
Massachusetts.....	9,941	a 3	b 2,852	1	c 2,446	4	5,298
North Carolina.....	5,151	3	615	1	130	4	735
Wisconsin.....	4,282	2	981	2	411	4	1,392
Connecticut.....	3,340	d 3	e 543	(f)	g 379	3	922
Ohio.....	3,149	3	217	2	507	5	724
New Hampshire.....	3,129	a 3	1,032	2	673	5	1,705
Tennessee.....	3,117	2	1,018	2	435	4	1,453
Illinois.....	2,913	3	599	3	203	6	599
Georgia.....	2,743	a 2	h 715	2	i 396	4	1,081
Michigan.....	2,545	2	1,609	1	215	3	1,914
Indiana.....	1,933	2	494	2	645	4	1,139
Virginia.....	1,715						
Other States.....	11,161						
Total.....	129,275	142	k 17,361	140	m 15,008	82	32,369

<sup>a</sup> Including 1 establishment which makes both hosiery and underwear.

<sup>b</sup> Including 789 persons part of whom work on underwear.

<sup>c</sup> Not including 789 persons part of whom work on underwear.

<sup>d</sup> Make both hosiery and underwear.

<sup>e</sup> Including 226 persons part of whom work on underwear.

<sup>f</sup> Three establishments, included under hosiery, make both hosiery and underwear.

<sup>g</sup> Not including 226 persons part of whom work on underwear.

<sup>h</sup> Including 138 persons part of whom work on underwear.

<sup>i</sup> Not including 138 persons part of whom work on underwear.

<sup>j</sup> Including 6 establishments which make both hosiery and underwear.

<sup>k</sup> Including 1,143 persons part of whom work on underwear.

<sup>l</sup> Not including 6 establishments which make both hosiery and underwear.

<sup>m</sup> Not including 1,143 persons part of whom work on underwear.

The report of the Bureau of Labor Statistics includes establishments engaged primarily in the manufacture of hosiery or underwear. Data are not included from knit-goods establishments whose main products are mittens, gloves, caps, mufflers, athletic goods, shawls, specialties, etc.

All information in the report was secured from pay rolls of the various establishments by agents of the bureau.

<sup>a</sup> Wages and Hours of Labor in the Hosiery and Underwear Industry, 1907 to 1914. Bulletin of the United States Bureau of Labor Statistics: Whole number, 177; Wages and Hours of Labor Series, No. 18.

A summary of the rates of wages and hours of labor in 1914 in the principal occupations of the hosiery industry is presented in Table 72.

TABLE 72.—AVERAGE FULL-TIME HOURS PER WEEK, RATES OF WAGES PER HOUR, AND FULL-TIME WEEKLY EARNINGS; AND PER CENT OF EMPLOYEES HAVING EACH CLASSIFIED FULL-TIME HOURS AND EARNING EACH CLASSIFIED RATE OF WAGES PER HOUR IN THE PRINCIPAL OCCUPATIONS IN 1914.

Occupation and sex.	Estab- lish- ments.	Em- ploy- ees.	Average full-time hours per week.	Per cent of employees whose full-time hours per week were—					Average rate of wages per hour.	Percent of employees earning each class- ified rate of wages per hour.					Average full-time week- ly earn- ings.
				Under 54	54 and under 57	57 and under 60	60 and over.	Under 9 cts.		9 and under 12 cts.	12 and under 16 cts.	16 and under 20 cts.	20 cts. and over.		
Inspectors and fold- ers, hosiery, fe- male.....	34	473	55.6	5	41	25	16	13	\$0.156	4	16	38	25	17	\$8.64
Knitters, footers, or toppers, male.....	16	305	56.3	4	3	22	44	8	.157	13	18	29	20	21	8.45
Knitters, footers, or toppers, female....	37	2,800	54.9	23	37	20	16	4	.150	9	17	32	27	14	8.24
Knitters, rib, female	13	56	54.9	9	63	9	13	7	.167	2	14	41	29	14	9.12
Loopers, female.....	42	2,318	54.8	13	49	19	14	5	.154	11	19	27	24	19	8.42
Menders, fine, ho- siery, female.....	29	309	54.8	6	67	12	9	7	.153	4	15	41	27	13	8.35
Menders, rough, ho- siery, female.....	39	867	55.1	7	38	37	13	5	.148	7	22	32	28	12	8.11
Press hands, female	3	41	54.0		98	2			.126	7	51	24	15	2	6.80
Toppers, full-fash- ioned hosiery, fe- male.....	9	528	54.4	24	25	51			.152	5	11	40	38	6	8.29
Winders, female....	27	464	54.3	16	50	28	5		.145	3	15	52	25	4	7.89
Other employees, hosiery, female....	38	2,873	54.8	15	41	23	16	5	.123	32	19	25	15	10	6.74
Other employees, hosiery and un- derwear, female....	5	527	54.2		78	22			.148	9	17	39	23	12	8.02
										Under 12 cts.	12 and under 16 cts.	16 and under 20 cts.	20 and under 25 cts.	25 cts. and over.	
Knitters, "lady hose," male.....	17	313	55.4		63	10	15	12	.198	3	11	39	36	10	10.98
Knitters, "lady hose," female....	12	125	54.2	20	47	23	1		.179	10	26	27	33	4	9.67
Knitters, rib, male....	25	126	55.7	12	27	22	34	5	.105	18	28	20	10	25	10.79
Seamers, full-fash- ioned hosiery, fe- male.....	9	306	51.4	17	34	49			.173	19	26	24	21	10	9.41
Welters, female....	25	285	55.3	3	61	9	15	11	.160	25	28	26	15	5	8.78
Other employees, male.....	38	2,390	55.5	11	30	37	14	8	.181	26	22	17	15	20	10.04
Other employees, hosiery and un- derwear, male....	5	616	51.7		74	15	8	3	.192	8	39	18	13	22	10.53
										Under 16 cts.	16 and under 20 cts.	20 and under 25 cts.	25 and under 30 cts.	30 cts. and over.	
Boarders, male....	40	1,007	55.3	7	40	29	17	7	.228	18	21	25	17	19	12.58
Knitters, full-fash- ioned hosiery, male.....	9	507	54.8	12	2	85			.407	1	3	5	11	80	22.31
Pressers, male.....	26	136	55.9	7	21	33	26	10	.217	25	21	21	19	14	12.07

<sup>a</sup> "Other employees" include all occupations in the mills not specified separately in the table. Certain mills make hosiery, others underwear, and a few hosiery and underwear, which distinctions are preserved in the table.



The rates of wages per hour appearing in the tables include the wages of time workers and the earnings of pieceworkers. All time rates by the day or week have been reduced to rates per hour, and the earnings of pieceworkers or of persons working at both time and piece rates have been reduced to rates per hour by dividing the earnings by the hours worked. Separation of time and piece workers was made to show what difference there might be in the wages of these two classes of workers in the several occupations. Where there was no record regularly kept in the factory of the actual time worked by pieceworkers the firms, at the request of the bureau, kept a special record for the pay period taken, making it possible to present classified rates.

The averages of full-time hours per week, rates of wages per hour, and full-time weekly earnings are computed by adding the data for each individual employee and dividing the total by the number of employees.

The full-time hours of labor per week shown in the tables are the regular hours of work of the occupations under normal conditions in the establishments. The figures given show the average full-time hours per week of the employees in each occupation and the number of employees whose full-time came within specified classification limits. The working time is the hours on duty, including intervals of waiting for work. The full-time hours per week do not in any way indicate the extent of unemployment. Employees may work overtime, broken time, or be laid off, or a temporary reduction may be made in working hours without such change affecting the full-time hours per week as here presented.

The full-time weekly earnings tabulated are the earnings per week of employees working full time, or the earnings on broken time reduced to equivalent earnings for a full week.

In this table it is seen that in 1914 the average full-time weekly earnings of males engaged in the hosiery industry, represented by 8 occupations, varied from \$22.31 for knitters, full-fashioned hosiery, to \$5.45 for knitters, footers, or toppers.

The average full-time weekly earnings of females in 1914, represented by 14 occupations, varied from \$9.67 for knitters, "lady hose," to \$6.74 for "other employees."

Table 73 shows the average full-time hours per week, and average and classified rates of wages per hour, for pieceworkers and time workers in the establishments in each State from which data were secured, in 1914.

TABLE 73.—AVERAGE FULL-TIME HOURS PER WEEK, AND AVERAGE AND CLASSIFIED RATES OF WAGES PER HOUR, FOR PIECEWORKERS AND TIME WORKERS, BY STATES, 1914.

BOARDERS, HOSIERY: MALE.

States.	Piece- workers or time workers.	Es- tab- lish- m'ts.	Em- ploy- ees.	Av. full-time hrs. per w'k.	Aver- age rate of wages per hour.	Employees earning each classified rate of wages per hour.																
						Un- der 5 cts.	5 and un- der 7 cts.	7 and un- der 8 cts.	8 and un- der 9 cts.	9 and un- der 10 cts.	10 and un- der 12 cts.	12 and un- der 14 cts.	14 and un- der 16 cts.	16 and un- der 18 cts.	18 and un- der 20 cts.	20 and un- der 25 cts.	25 and un- der 30 cts.	30 and over.				
Georgia.....	Piece..	3	69	58.6	\$0.165				3		4	10	18	9	13	10	2					
Illinois.....	do..	2	41	56.1	.181				1		2	4	3	9	10	10	2					
Indiana.....	do..	2	106	55.0	.246			1	3	1	2	6	1	3	8	24	23					
Massachusetts.....	do..	3	223	54.0	.214					1	1	3	21	27	37	88	32	15				
New Hamp- shire.....	do..	3	45	55.0	.208						1		6	3	10	18	7					
North Carolina.....	do..	3	53	59.4	.177				3	2	2	3	8	11	6	14	4					
Pennsylvania.....	do..	9	315	54.2	.285						1	4	2	7	15	59	86	141				
	Time..	3	10	54.7	.229								2			3	5					
	Total..	10	325	54.2	.283						1	4	4	7	15	62	91	141				
Tennessee.....	Piece..	2	76	57.9	.153		1	1	4	4	3	15	14	14	10	10						
	Time..	1	3	57.9	.126				1				2									
	Total..	2	79	57.9	.152		1	2	4	4	3	15	16	14	10	10						
Virginia.....	Piece..	2	42	57.6	.170				1		1	5	9	12	5	9						
Wisconsin.....	do..	2	47	55.0	.278										2	12	15	18				
	Time..	1	1	55.0	.309													1				
	Total..	2	48	55.0	.279										2	12	15	19				
Other States..	Piece..	7	55	54.8	.217					1	2	2	1	6	10	20	9	4				
	Time..	2	11	54.5	.173						2	4	1			4						
	Total..	8	66	54.8	.209					1	2	4	5	7	10	24	9	4				
Grand total.	Piece..	38	1,072	55.3	.228		1	2	15	9	19	52	83	101	126	272	186	206				
	Time..	7	25	55.0	.195							2	8	1		7	5	1				
	Total..	40	1,097	55.3	.228		1	3	15	9	19	54	91	102	126	279	191	207				

INSPECTORS AND FOLDERS, HOSIERY: FEMALE.

States.	Piece- Time..	1	30	55.0	\$0.142	Employees earning each classified rate of wages per hour.																
						Un- der 5 cts.	5 and under 7 cts.	7 and under 8 cts.	8 and under 9 cts.	9 and under 10 cts.	10 and under 12 cts.	12 and under 14 cts.	14 and under 16 cts.	16 and under 18 cts.	18 and under 20 cts.	20 and under 25 cts.	25 and under 30 cts.	30 and over.	Total.			
Connecticut.....	Piece..	1	30	55.0	.142						5	10	7	6	1	1						
	Time..	1	1	55.0	.100																	
	Total..	2	31	55.0	.141						6	10	7	6	1	1						
Georgia.....	Piece..	2	44	59.4	.120			3	2		20	8	8	3								
	Time..	2	8	56.3	.109						6	2										
	Total..	3	52	58.9	.118			3	2		26	10	8	3								
Indiana.....	Piece..	2	45	55.0	.141					3	13	8	9	5	5	2						
Massachusetts.....	do..	3	101	54.0	.181					1	3	8	17	14	23	35						
North Carolina.....	do..	3	29	59.9	.146				1		3	7	10	4	3	1						
Pennsylvania.....	do..	6	69	54.0	.190		1				1	2	13	13	20	13	4	2				
	Time..	3	30	53.9	.117		7	1			1	16	2		1	2						
	Total..	7	99	54.0	.168		8	1			2	18	15	13	21	15	4	2				
Tennessee.....	Piece..	2	38	57.9	.133			1			8	16	8	5								
	Time..	2	5	57.9	.119						1	2	1									
	Total..	2	43	57.9	.132			2			9	18	9	5								
Other States..	Piece..	11	62	55.5	.171			1	1		9	9	8	5	8	17	4					
	Time..	3	11	54.5	.134						2	4	3	1	1							
	Total..	12	73	55.3	.166			1	1		11	13	11	6	9	17	4					
Grand total.	Piece..	30	418	55.7	.161		1	5	4	4	62	68	80	55	60	69	8	2				
	Time..	11	55	54.7	.119		7	2			11	24	6	1	2	2						
	Total..	34	473	55.6	.156		8	7	4	4	73	92	86	56	62	71	8	2				

TABLE 73.—AVERAGE FULL-TIME HOURS PER WEEK, AND AVERAGE AND CLASSIFIED RATES OF WAGES PER HOUR, FOR PIECEWORKERS AND TIME WORKERS, BY STATES, 1914—Continued.

## KNITTERS, FOOTERS, OR TOPPERS, HOSIERY: MALE.

States.	Piece-workers or time workers.	Es-tab-lish-m'ts.	Em-ploy-ees.	Av. full-time hrs. per w'k.	Average rate of wages per hour.	Employees earning each classified rate of wages per hour.																	
						Un-der 5 cts.	5 and under 7 cts.	7 and under 8 cts.	8 and under 9 cts.	9 and under 10 cts.	10 and under 12 cts.	12 and under 14 cts.	14 and under 16 cts.	16 and under 18 cts.	18 and under 20 cts.	20 and under 25 cts.	25 and under 30 cts.	30 cts. and over.					
Georgia.....	Piece..	3	42	58.9	\$0.121	...	5	3	2	4	6	9	6	4	3								
New Hamp-shire.....	do..	3	66	55.0	.186	...			1	1	1	6	8	15	11	18	4	1					
Tennessee.....	Piece..	2	77	58.0	.119	...	10	4	1	13	15	12	10	6	3	3							
	Time..	1	2	58.0	.116	...						1											
	Total	2	79	58.0	.119	...	10	4	1	13	16	13	10	6	3	3							
Virginia.....	Piece..	2	33	57.8	.143	...	3	3	1	3	2	6	5		2	6	2						
Other States..	Piece..	6	82	53.9	.172	...	3	3		1	8	7	16	7	9	20	8						
	Time..	1	3	54.0	.142	...						1											
	Total	6	85	53.9	.171	...	3	3		2	8	8	16	7	9	21	8						
Grand total..	Piece..	16	300	56.3	.151	...	21	13	5	22	32	40	45	32	28	47	14	1					
	Time..	2	5	55.6	.132	...				1	1	2											
	Total	16	305	56.3	.151	...	21	13	5	23	33	42	45	32	28	48	14	1					

## KNITTERS, FOOTERS, OR TOPPERS, HOSIERY: FEMALE.

Connecticut..	Piece..	2	134	55.0	\$0.157		2	3		4	5	19	36	31	19	15							
do.....	do..	3	120	57.4	.114		12	5	13	12	33	21	10	7	5	2							
Illinois.....	Piece..	3	173	53.8	.112		18	10	12	23	39	39	22	6	4								
	Time..	1	1	48.0	.100																		
	Total..	3	174	53.8	.112		18	10	12	23	40	39	22	6	4								
Massachusetts.	Piece..	3	178	54.0	.156		1	1	2	4	16	23	45	36	45	4	1						
	Time..	1	9	54.0	.104					7		1											
	Total..	3	187	54.0	.153		1	1	2	11	16	24	46	36	45	4	1						
Michigan.....	Piece..	2	60	53.5	.182						5	10	6	11	6	19	3						
	Time..	1	2	52.5	.171																		
	Total..	2	62	53.5	.182						5	10	6	13	6	19	3						
New Hamp-shire.	Piece..	3	145	55.0	.140		6		2	8	24	38	26	20	14	6	1						
	Time..	1	6	55.0	.154						2			4									
	Total..	3	151	55.0	.141		6		2	8	24	40	26	24	14	6	1						
North Carolina	Piece..	3	129	59.1	.099		23	15	19	9	36	22	8	9									
Ohio.....	do..	3	65	52.2	.138				1	2	10	19	21	9	3								
Pennsylvania.	Piece..	8	1,235	53.9	.167		11	5	18	36	108	156	202	208	209	260	21	1					
	Time..	2	9	54.0	.166							2	5										
	Total..	8	1,244	53.9	.167		11	5	18	36	108	158	207	208	209	262	21	1					
Tennessee.....	Piece..	2	234	57.9	.147		11	8	9	12	28	35	36	41	25	23	6						
Virginia.....	do..	2	68	57.6	.112		12	4	3	5	17	13	5	5	4								
Wisconsin.....	Piece..	2	115	55.0	.164					4	3	14	27	11	11	14	28	3					
	Time..	1	2	55.0	.109						1												
	Total..	2	117	55.0	.163					4	4	14	28	11	11	14	28	3					
Other States..	Piece..	1	115	55.0	.136			1	14	5	22	25	19	12	11	5	1						
Grand total..	Piece..	37	2,771	54.9	.151		96	52	97	123	351	447	447	400	359	362	36	1					
	Time..	7	29	54.0	.138					8	1	6	6			2							
	Total..	37	2,800	54.9	.150		96	52	97	131	352	453	453	400	359	364	36	1					

TABLE 73.—AVERAGE FULL-TIME HOURS PER WEEK, AND AVERAGE AND CLASSIFIED RATES OF WAGES PER HOUR, FOR PIECEWORKERS AND TIME WORKERS, BY STATES, 1914—Continued.

## KNITTERS, FULL-FASHIONED HOSIERY: MALE.

States.	Piece-workers or time workers.	Es-tab-lish-m'ts.	Em-ploy-ees.	Av. full-time hrs. per w'k.	Average rate of wages per hour.	Employees earning each classified rate of wages per hour.																	
						Un-der 5 cts.	5 and under 7 cts.	7 and under 8 cts.	8 and under 9 cts.	9 and under 10 cts.	10 and under 12 cts.	12 and under 14 cts.	14 and under 16 cts.	16 and under 18 cts.	18 and under 20 cts.	20 and under 25 cts.	25 and under 30 cts.	30 cts. and over					
Indiana . . . . .	Piece . .	2	234	55.0	\$0.394												3	12	27	192			
Pennsylvania . . . . .	do . .	4	229	54.6	.424							1	2	6	1	6	15	19	180				
Other States . . . . .	do . .	3	44	55.0	.384												1		10	33			
Total . . . . .	Piece . .	9	507	54.8	.407							1	2	7	9	27	56	405					

## KNITTERS, "LADY HOSE": MALE.

Massachusetts.	Piece..	2	146	54.0	\$0.192										3	1	5	7	27	52	42	9	
	Time..	1	1	54.0	.196															1			
	Total..	2	147	54.0	.192										3	1	5	7	27	53	42	9	
New Hamp- shire.	Piece..	2	20	55.0	.208															2	3	14	1
Pennsylvania.	Piece..	2	50	54.0	.214										1		3	4	5	32	5		
	Time..	1	1	54.0	.255															1			
	Total..	2	51	54.0	.214										1		3	4	5	32	6		
Other States..	Piece..	11	82	58.3	.192										4	8	10	16	11	22	9	2	
	Time..	2	13	59.3	.219										1	1			1	1	4	3	
	Total..	11	95	58.4	.196										5	9	10	17	12	26	12	4	
Grand total.	Piece..	17	298	55.3	.197										3	6	13	20	49	71	110	24	2
	Time..	4	15	58.6	.220										1	1		1	2	4	4	2	
	Total..	17	313	55.4	.198										3	7	14	20	50	73	114	28	4

## KNITTERS, "LADY HOSE": FEMALE.

Pennsylvania.	Piece..	6	63	53.9	\$0.201										2		6	10	7	33	5	
Wisconsin.....	do..	2	19	55.0	.164										4	3	2	4	2	4		
Other States..	Piece..	4	40	54.2	.154										1	4	9	12	5	6	3	
	Time..	1	3	54.0	.135										2					1		
	Total..	4	43	54.2	.153										3	4	9	12	5	6	4	
Grand total..	Piece..	12	122	54.2	.180										1	10	12	20	19	15	40	5
	Time..	1	3	54.0	.135										2					1		
	Total..	12	125	54.2	.179										3	10	12	20	19	15	41	5

## KNITTERS, RIB, HOSIERY: MALE.

Grand total..	Piece..	11	59	55.9	\$0.241										1	1	2	2	11	3	5	8	9
	Time..	18	67	55.5	.155										1			18	14	8	12	5	4
	Total..	25	126	55.7	.195										1	1	1	20	16	19	15	10	12

## KNITTERS, RIB, HOSIERY: FEMALE.

Grand total..	Piece..	8	37	55.0	\$0.188										1		1	1	1	9	3	5	12
	Time..	7	19	54.6	.126												6	9	4				
	Total..	13	56	54.9	.167										1		1	7	10	13	3	5	12

TABLE 73.—AVERAGE FULL-TIME HOURS PER WEEK, AND AVERAGE AND CLASSIFIED RATES OF WAGES PER HOUR, FOR PIECEWORKERS AND TIME WORKERS, BY STATES, 1914—Continued.

LOOPERS, HOSIERY: FEMALE.

States.	Piece-workers or time workers.	Estab-lish-m'ts.	Em-ploy-ees.	Av. full-time hrs. per w'k.	Average rate of wages per hour.	Employees earning each classified rate of wages per hour.														
						Under 5 cts.	5 and under 7 cts.	7 and under 8 cts.	8 and under 9 cts.	9 and under 10 cts.	10 and under 12 cts.	12 and under 14 cts.	14 and under 16 cts.	16 and under 18 cts.	18 and under 20 cts.	20 and under 25 cts.	25 and under 30 cts.	30 cts. and over.		
Connecticut.....	Piece..	2	58	55.0	\$.182						4	7	6	8	14	17	2			
Georgia.....	do.....	3	111	58.9	.133		12	8	7	11	16	12	11	12	9	10	2		1	
Illinois.....	do.....	3	110	54.9	.114		11	11	9	17	17	12	17	11	3	2				
Indiana.....	do.....	2	119	55.0	.141			8	3	8	23	18	16	17	10	13	1			
Massachusetts.....	do.....	3	431	54.0	.150		12	13	18	23	52	73	68	59	51	57	7			
Michigan.....	do.....	3	82	53.9	.169		1	2	4	4	8	21	10	4	4	17	6		1	
	Time..	1	1	52.5	.152								1							
	Total..	3	83	53.9	.169		1	2	4	4	8	21	11	4	4	17	6		1	
New Hamp-shire.....	Piece..	3	147	55.0	.171		2	4	3	4	14	14	16	13	26	44	5			
North Carolina.....	do.....	3	84	58.8	.113		6	8	5	14	24	9	7	7	4					
Ohio.....	do.....	3	27	52.6	.150					1	8	1	5	7	2	3				
Pennsylvania.....	do.....	11	818	63.9	.170		3	18	22	26	79	99	126	111	113	199	43		19	
	Time..	2	4	51.0	.155							2		1						
	Total..	11	822	53.9	.170		3	18	22	26	79	101	126	112	114	199	43		19	
Tennessee.....	Piece..	2	124	57.9	.125		15	8	7	9	28	16	17	3	12	8			1	
Virginia.....	do.....	2	61	57.7	.123		3	4	4	18	18	16	6	6	3	1				
Wisconsin.....	do.....	2	141	53.6	.158		3	3	7	10	20	15	14	22	14	29	1		3	
Grand total.....	do.....	42	2,313	54.8	.154		68	87	89	131	311	307	319	284	265	360	67		25	
	Time..	3	5	53.7	.155							2	1							
	Total..	42	2,318	54.8	.154		68	87	89	131	311	309	320	285	266	360	67		25	

MENDERS, FINE, HOSIERY: FEMALE.

Massachusetts	Piece..	3	103	54.0	\$0.149		1	1		2	10	23	24	29	11	2		
	Time..	2	2	54.0	.005			1			1							
	Total.	3	105	54.0	.148		1	2		2	11	23	24	29	11	2		
Pennsylvania	Piece..	8	87	54.0	.179					3	7	7	14	13	15	24	2	2
	Time..	3	5	53.9	.200						1					4		
	Total.	8	92	54.0	.180					3	8	7	14	13	15	28	2	2
Other States..	Piece..	14	84	57.1	.137		1	4	4	3	16	19	17	7	7	5	1	
	Time..	5	28	56.2	.126					3	1	19	3	2				
	Total.	18	112	56.4	.135		1	4	4	6	17	38	20	9	7	5	1	
Grand total.	Piece..	25	274	54.9	.155		2	5	4	8	33	49	55	49	33	31	3	2
	Time..	10	33	54.1	.138			1		3	3	19	3	2		4		
	Total.	29	306	54.8	.153		2	6	4	11	36	68	58	51	33	35	3	2

TABLE 73.—AVERAGE FULL-TIME HOURS PER WEEK, AND AVERAGE AND CLASSIFIED RATES OF WAGES PER HOUR, FOR PIECEWORKERS AND TIME WORKERS, BY STATES, 1914—Continued.

MENDERS, ROUGH, HOSIERY: FEMALE.

States.	Piece-workers or time-workers.	Estab-lish-ment's	Em-ploy-ees.	Av. full-time hrs. per w.k.	Average rate of wages per hour.	Employees earning each classified rate of wages per hour.														
						Under 5 cts.	5 and under 7 cts.	7 and under 8 cts.	8 and under 9 cts.	9 and under 10 cts.	10 and under 12 cts.	12 and under 14 cts.	14 and under 16 cts.	16 and under 18 cts.	18 and under 20 cts.	20 and under 25 cts.	25 and under 30 cts.	30 cts. and over.		
Connecticut.....	Piece..	3	48	55.0	\$0.161	...	...	...	...	...	1	8	10	23	4	2	...	...		
Georgia.....	Piece..	2	71	59.0	.116	...	6	1	10	10	8	17	17	2	...	...	...	...		
		1	11	55.0	.100	...	...	...	...	...	11	...	...	...	...	...	...	...		
Total		3	82	58.5	.114	...	6	1	10	10	19	17	17	2	...	...	...	...		
Indiana.....	Piece..	2	112	55.0	.145	...	...	2	6	8	15	22	18	21	5	10	10	...		
		1	13	55.0	.172	...	...	...	...	...	1	...	...	6	1	...	...	...		
Total		2	125	55.0	.147	...	...	2	6	8	15	23	18	26	16	11	...	...		
Massachusetts.	Piece..	3	115	54.0	.140	...	4	1	2	4	18	26	27	17	15	1	...	...		
		2	2	54.0	.126	...	...	...	...	1	...	1	...	...	...	...	...	...		
Total		3	117	54.0	.140	...	4	1	2	4	19	26	28	17	15	1	...	...		
Michigan.....	Piece..	2	37	53.9	.187	...	...	...	...	3	1	4	10	9	7	2	1	...		
		1	3	52.5	.158	...	...	...	...	1	1	1	...	1	...	...	...	...		
Total		2	40	53.8	.184	...	...	...	...	3	2	5	10	10	7	2	1	...		
New Hamp-shire.	Piece..	3	60	55.0	.159	...	...	1	1	1	5	5	8	27	10	2	...	...		
Pennsylvania.	Piece..	8	183	54.0	.171	...	1	...	3	6	37	11	14	17	24	67	1	2		
		3	23	53.6	.151	...	...	...	...	7	7	5	3	5	3	...	...	...		
Total		9	206	53.9	.169	...	1	...	3	6	38	18	21	22	27	67	1	2		
Tennessee.....	Piece..	2	41	58.0	.109	...	4	4	3	9	7	8	3	1	2	...	...	...		
Wisconsin.....	Piece..	2	75	55.0	.149	...	...	...	...	4	7	13	24	20	4	3	...	...		
		1	2	55.0	.123	...	...	...	...	1	1	1	...	...	...	...	...	...		
Total		2	77	55.0	.148	...	...	...	...	4	8	14	24	20	4	3	...	...		
Other States..	Piece..	9	64	56.4	.122	...	1	5	6	6	19	12	7	1	2	4	1	...		
		1	7	53.5	.113	...	...	...	...	6	...	...	1	...	...	...	...	...		
Total		10	71	56.1	.122	...	1	5	6	6	25	12	8	1	2	4	1	...		
Grand total.	Piece..	36	806	55.2	.148	...	16	14	31	48	220	223	132	139	10	96	1	3		
		10	61	54.1	.141	...	...	...	...	20	10	10	10	10	10	10	10	10		
Total		39	867	55.1	.148	...	16	14	31	48	140	133	142	149	90	97	4	3		

PRESSERS, HOSIERY: MALE.

Grand total...	Piece..	21	110	56.2	\$0.232	2	5	5	6	13	9	25	26	19
	Time..	6	26	54.8	.153	2	2	9	5	5	1	4		
	Total	26	136	55.9	.217	2	7	14	11	18	10	29	26	19

PRESS HANDS, HOSIERY: FEMALE.

Total.....	Piece..	3	41	54.0	\$0.126	.....	2	1	2	19	7	3	2	4	1	.....
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SEAMERS, FULL-FASHIONED HOSIERY: FEMALE.

[illegible]

TABLE 73.—AVERAGE FULL-TIME HOURS PER WEEK, AND AVERAGE AND CLASSIFIED RATES OF WAGES PER HOUR, FOR PIECEWORKERS AND TIME WORKERS, BY STATES, 1914—Continued.

## TOPPERS, FULL-FASHIONED HOSIERY: FEMALE.

States.	Piece-workers or time workers.	Estab-lish-m'ts.	Em-ploy-ees.	Av. full-time hrs. per w'k.	Average rate of wages per hour.	Employees earning each classified rate of wages per hour.															
						Under 5 cts.	5 and under 7 cts.	7 and under 8 cts.	8 and under 9 cts.	9 and under 10 cts.	10 and under 12 cts.	12 and under 14 cts.	14 and under 16 cts.	16 and under 18 cts.	18 and under 20 cts.	20 and under 25 cts.	25 and under 30 cts.	30 cts. and over.			
Pennsylvania.	Piece..	4	259	53.9	\$0.157	....	2	1	4	8	24	42	52	61	44	18	3	.....			
Other States..	Piece..	5	268	54.9	.148	....	3	14	4	4	22	35	82	60	34	9	1	.....			
	Time..	1	55.0	.135	....	....	....	....	....	....	....	....	....	....	....	....	....	.....			
Grand total.	Total	5	269	54.9	.148	....	3	14	4	4	22	36	82	60	34	9	1	.....			
	Piece..	9	527	54.4	.152	....	5	15	8	12	46	77	134	121	78	27	4	.....			
	Time..	1	55.0	.135	....	....	....	....	....	....	....	....	....	....	....	....	....	.....			
	Total	9	528	54.4	.152	....	5	15	8	12	46	78	....	121	78	27	4	.....			

## WELTERS, HOSIERY: FEMALE.

Georgia.....	Piece..	3	28	58.7	\$0.134	...	...	...	...	2	6	9	7	2	1	1	...	...		
	Time..	1	1	55.0	.100	...	...	...	...	...	1	...	...	...	...	...	...	...		
	Total	3	29	58.6	.133	...	...	...	...	2	7	9	7	2	1	1	...	...		
Massachusetts.	Piece..	3	109	54.0	.144	...	...	2	5	6	21	22	13	11	21	8	...	...		
Pennsylvania.	Piece..	6	69	54.0	.203	...	...	...	1	1	6	1	10	17	23	6	4	...		
	Time..	1	1	54.0	.200	...	...	...	...	...	...	...	...	...	...	...	...	...		
	Total	6	70	54.0	.203	...	...	...	1	1	6	1	10	17	24	6	4	...		
Other States..	Piece..	13	76	57.2	.152	...	3	1	2	8	12	11	12	8	5	10	1	3		
	Time..	1	1	55.0	.091	...	...	...	...	...	...	...	...	...	...	...	...	...		
	Total	13	77	57.2	.151	...	3	1	2	9	12	11	12	8	5	10	1	3		
Grand total.	Piece..	25	282	55.3	.160	...	3	3	7	17	40	48	33	31	44	42	7	7		
	Time..	3	3	54.7	.130	...	...	...	...	...	...	...	...	...	...	...	...	...		
	Total	25	285	55.3	.160	...	3	3	7	18	41	48	33	31	44	43	7	7		

## WINDERS, HOSIERY: FEMALE.

Indiana.....	Piece..	2	59	55.0	\$0.156	...	...	...	...	3	12	20	16	5	3	...	...		
	Time..	1	12	55.0	.152	...	...	...	...	...	1	6	5	...	...	...	...		
	Total	2	71	55.0	.155	...	...	...	...	...	13	26	21	5	3	...	...		
Massachusetts.	Piece..	2	62	54.0	.150	...	...	...	...	10	10	19	15	7	1	...	...		
	Time..	1	7	54.0	.101	...	...	...	...	4	3	...	...	...	...	...	...		
	Total	2	69	54.0	.145	...	...	...	...	4	13	10	19	15	7	1	...		
New Hamp-shire.	Piece..	3	38	55.0	.160	...	...	...	...	1	4	5	12	5	6	5	...		
	Time..	1	7	55.0	.121	...	...	...	...	...	7	...	...	...	...	...	...		
	Total	3	45	55.0	.154	...	...	...	...	1	4	12	12	5	6	5	...		
Pennsylvania.	Piece..	5	75	54.0	.157	...	2	...	4	4	9	20	15	14	6	1	...		
	Time..	7	149	53.9	.146	...	3	...	1	5	38	74	17	9	2	...	...		
	Total	10	224	53.9	.150	...	5	...	5	9	47	94	32	23	8	1	...		
Other States..	Piece..	6	21	55.4	.126	...	2	...	1	6	2	4	2	...	2	...	...		
	Time..	6	34	53.9	.099	...	2	...	5	16	8	2	1	...	...	...	...		
	Total	10	55	54.5	.109	...	2	4	5	17	14	4	5	2	...	2	...		
Grand total.	Piece..	18	255	54.5	.153	...	4	2	...	6	27	38	75	63	32	17	1		
	Time..	16	209	54.0	.136	...	3	2	...	5	21	16	48	81	22	9	2		
	Total	27	464	54.3	.145	...	7	4	5	27	43	86	156	75	41	19	1		

TABLE 73.—AVERAGE FULL-TIME HOURS PER WEEK, AND AVERAGE AND CLASSIFIED RATES OF WAGES PER HOUR, FOR PIECEWORKERS AND TIME WORKERS, BY STATES, 1914—Continued.

## OTHER EMPLOYEES, HOSIERY: MALE.

States.	Piece-workers or time workers.	Estab-lish-ment's.	Em-ploy-ees.	Av. full-time hrs. per w'k.	Average rate of wages per hour.	Employees earning each classified rate of wages per hour.															
						Under 5 cts.	5 and under 7 cts.	7 and under 8 cts.	8 and under 9 cts.	9 and under 10 cts.	10 and under 12 cts.	12 and under 14 cts.	14 and under 16 cts.	16 and under 18 cts.	18 and under 20 cts.	20 and under 25 cts.	25 and under 30 cts.	30 cts. and over.			
Georgia.....	Piece..	3	62	58.0	\$0.098	16	11	3	2	7	10	1	4	1	2	1	1	1			
	Time..	3	108	58.9	.171	4	4	3	2	13	28	12	12	2	10	8	10	10			
	Total.	3	170	58.6	.144	20	15	6	5	2	38	13	16	3	12	9	11				
Illinois.....	Piece..	3	29	51.8	.116		8	6	2	1	2	4	2	1	4	6					
	Time..	3	50	57.3	.196						2	4	7	10	4	13	6	4			
	Total.	3	79	55.3	.167		8	6	2	1	4	5	9	11	4	19	6	4			
Indiana.....	Piece..	2	164	55.0	.147	2	32	10	13	10	11	17	7	14	3	11	27	7			
	Time..	1	90	56.4	.260					4	1	8	5	3	23	20	25	25			
	Total.	2	254	55.5	.187	2	32	10	14	10	15	18	15	19	6	34	47	32			
Massachusetts.	Piece..	2	87	54.0	.167	1				2	2	13	20	27	17	5					
	Time..	2	184	54.0	.226						10	11	33	26	25	23	34				
	Total.	2	271	54.0	.207	1				2	12	24	53	53	42	27	23	34			
Michigan.....	Piece..	1	65	54.0	.165	4	1		1	3	6	8	16	7	3	17	3	2			
	Time..	2	60	53.9	.198						1	11	10	8	7	10	5	8			
	Total.	2	125	54.0	.181	4	1		1	3	7	19	20	15	10	27	8	10			
New Hamp-shire.	Piece..	3	114	55.0	.177		3	1	4	3	7	11	18	18	23	12	7	7			
	Time..	3	113	56.2	.197					1	3	21	10	23	8	26	12	9			
	Total.	3	227	55.6	.187		3	1	4	4	10	32	28	41	31	38	19	16			
North Carolina	Piece..	3	14	58.3	.127	3	2	1	1		1	1	1	1	2						
	Time..	3	87	59.2	.143	7	6	4	2	2	7	24	9	2		17	2	1	5		
	Total.	3	101	59.1	.141	10	8	5	3	2	8	25	10	3	2	17	2	6			
Ohio.....	Piece..	1	2	54.0	.150																
	Time..	3	16	55.0	.248							2	1	2	1	2	3	5			
	Total.	3	18	54.9	.237																
Pennsylvania.	Piece..	8	163	54.3	.166	1	3	6	10	9	28	31	13	18	12	15	8	9			
	Time..	11	590	54.5	.189	2	13	34	33	20	108	38	41	25	22	103	56	95			
	Total.	11	753	54.5	.184	3	16	40	43	29	136	69	54	43	34	118	64	104			
Tennessee.....	Piece..	2	44	57.9	.118	16	5		3	1	4	4			3	1	4	3			
	Time..	2	91	59.0	.188			1		1	7	19	30	5	4	10	4	13			
	Total.	2	138	58.7	.165	16	5	1	3	2	11	23	30	5	7	11	8	16			
Virginia.....	Piece..	2	28	57.7	.091	5	5	5	5	1	1	2	2	1				1			
	Time..	2	58	58.3	.177	3	1	1	1	1	7	14	5	3	2	8	3	9			
	Total.	2	86	58.1	.149	8	6	6	6	2	8	16	7	4	2	8	3	10			
Wisconsin.....	Piece..	2	120	54.5	.206				1		2	10	8	11	14	32	13	15			
	Time..	2	48	54.7	.188						1	3	2		18	4	15	4	1		
	Total.	2	168	54.6	.201				1		3	13	10	11	32	18	47	17	16		
Grand total.	Piece..	32	892	55.0	.158	48	70	33	42	34	79	107	85	106	78	101	63	46	218		
	Time..	37	1,498	55.8	.195	16	24	43	39	26	165	175	166	139	82	259	146	218			
	Total.	38	2,390	55.5	.181	64	94	76	81	60	244	282	251	245	160	360	209	264			



TABLE 73.—AVERAGE FULL-TIME HOURS PER WEEK, AND AVERAGE AND CLASSIFIED RATES OF WAGES PER HOUR, FOR PIECEWORKERS AND TIME WORKERS, BY STATES, 1914—Continued.

## OTHER EMPLOYEES, HOSIERY: FEMALE.

States.	Piece-workers or time workers.	Estab-lish-ments.	Em-ploy-ees.	Av. full-time hrs. per w'k.	Average rate of wages per hour.	Employees earning each classified rate of wages per hour.																								
						Under 5 cts.	5 and under 7 cts.	7 and under 8 cts.	8 and under 9 cts.	9 and under 10 cts.	10 and under 12 cts.	12 and under 14 cts.	14 and under 16 cts.	16 and under 18 cts.	18 and under 20 cts.	20 and under 25 cts.	25 and under 30 cts.	30 cts. and over.												
Georgia.....	Piece..	3	76	58.9	\$0.085	17	13	5	10	17	5	4	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2
	Time..	3	24	57.5	.077	3	13	2	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1
	Total..	3	100	58.6	.083	20	27	7	10	18	5	7	1	3	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2
Illinois.....	Piece..	3	76	56.5	.128	6	11	1	4	1	4	13	10	13	5	7	2	2	2	2	2	2	2	2	2	2	2	2	2	2
	Time..	3	18	54.5	.134	1	4	1	1	2	2	4	5	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1
	Total..	3	94	56.1	.129	6	11	1	5	4	6	17	15	14	5	9	2	2	2	2	2	2	2	2	2	2	2	2	2	2
Indiana.....	Piece..	2	190	55.0	\$0.110	9	36	32	5	7	23	20	22	19	7	10	10	10	10	10	10	10	10	10	10	10	10	10	10	10
	Time..	2	7	55.0	.149	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1
	Total..	2	197	55.0	.112	9	36	32	5	7	24	20	23	21	8	10	10	10	10	10	10	10	10	10	10	10	10	10	10	10
Massachusetts.	Piece..	2	121	54.0	.151	4	11	16	16	20	13	21	17	17	17	17	17	17	17	17	17	17	17	17	17	17	17	17	17	17
	Time..	2	61	54.0	.150	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1
	Total..	2	182	54.0	.150	4	11	16	16	20	13	21	17	17	17	17	17	17	17	17	17	17	17	17	17	17	17	17	17	17
Michigan.....	Piece..	2	153	54.0	.146	4	2	14	5	5	23	17	23	21	17	15	5	2	2	2	2	2	2	2	2	2	2	2	2	2
	Time..	2	16	53.0	.133	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1
	Total..	2	169	53.9	.145	4	2	14	5	8	24	23	25	25	17	15	5	2	2	2	2	2	2	2	2	2	2	2	2	2
New Hamp-shire.	Piece..	3	112	55.0	.156	5	7	1	1	4	9	11	17	10	17	29	1	1	1	1	1	1	1	1	1	1	1	1	1	1
	Time..	3	60	55.0	.126	1	1	1	1	1	6	27	12	6	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1
	Total..	3	172	55.0	.146	13	7	1	1	4	15	38	20	16	18	29	1	1	1	1	1	1	1	1	1	1	1	1	1	1
North Carolina	Piece..	3	78	58.8	.094	18	9	3	4	5	14	14	7	3	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1
	Time..	3	42	59.6	.067	8	20	5	1	1	2	6	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1
	Total..	3	120	59.1	.085	26	29	8	4	5	16	20	8	3	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1
Ohio.....	Piece..	2	42	51.7	.132	2	13	8	7	2	1	2	2	2	1	2	1	2	1	2	1	2	1	2	1	2	1	2	1	2
	Time..	3	3	53.0	.113	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1
	Total..	3	45	51.8	.131	2	13	8	7	2	1	2	2	2	1	2	1	2	1	2	1	2	1	2	1	2	1	2	1	2
Pennsylvania.	Piece..	11	624	53.3	.132	66	63	30	48	32	50	56	56	69	54	65	29	6	6	6	6	6	6	6	6	6	6	6	6	6
	Time..	11	524	53.9	.109	22	29	131	42	31	63	115	31	16	20	16	8	8	8	8	8	8	8	8	8	8	8	8	8	8
	Total..	11	1,148	53.6	.121	88	92	161	90	63	113	171	87	85	74	81	37	6	6	6	6	6	6	6	6	6	6	6	6	6
Tennessee.....	Piece..	2	167	57.9	.097	35	15	6	14	24	17	25	18	9	4	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1
	Time..	2	29	57.9	.097	11	1	1	1	1	5	6	5	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1
	Total..	2	196	57.9	.097	46	16	6	14	24	22	31	23	10	4	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1
Virginia.....	Piece..	2	133	57.7	.099	8	26	8	12	18	25	17	11	4	2	2	1	1	1	1	1	1	1	1	1	1	1	1	1	1
	Time..	2	8	58.3	.112	3	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1
	Total..	2	141	57.7	.099	11	26	8	13	18	26	17	12	4	3	2	1	1	1	1	1	1	1	1	1	1	1	1	1	1
Wisconsin.....	Piece..	2	292	54.4	.152	1	10	7	26	10	48	47	31	32	27	37	11	5	5	5	5	5	5	5	5	5	5	5	5	5
	Time..	1	17	53.5	.113	1	2	1	2	6	3	2	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1
	Total..	2	309	54.4	.150	1	10	9	27	12	54	50	33	33	27	37	11	5	5	5	5	5	5	5	5	5	5	5	5	5
Grand total.	Piece..	37	2,064	55.0	.128	169	199	106	131	133	256	248	221	194	159	186	47	15	15	15	15	15	15	15	15	15	15	15	15	15
	Time..	37	809	54.6	.111	55	63	140	49	37	109	172	80	39	34	21	10	10	10	10	10	10	10	10	10	10	10	10	10	10
	Total..	38	2,873	54.8	.123	224	262	246	180	170	365	420	301	233	193	207	57	15	15	15	15	15	15	15	15	15	15	15	15	15

TABLE 73.—AVERAGE FULL-TIME HOURS PER WEEK, AND AVERAGE AND CLASSIFIED RATES OF WAGES PER HOUR, FOR PIECEWORKERS AND TIME WORKERS, BY STATES, 1914—Continued.

## OTHER EMPLOYEES, HOSIERY AND UNDERWEAR: a MALE.

States.	Piece-workers or time workers.	Estab-lish-ments.	Em-ploy-ees.	Av. full-time hrs. per w'k.	Average rate of wages per hour.	Employees earning each classified rate of wages per hour.																							
						Under 5 cts.	5 and under 7 cts.	7 and under 8 cts.	8 and under 9 cts.	9 and under 10 cts.	10 and under 12 cts.	12 and under 14 cts.	14 and under 16 cts.	16 and under 18 cts.	18 and under 20 cts.	20 and under 25 cts.	25 and under 30 cts.	30 cts. and over.											
Grand total...	Piece..	4	116	54.9	\$0.200	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
	Time..	5	500	54.7	.190	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
	Total.	5	616	54.7	.192	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....

## OTHER EMPLOYEES, HOSIERY AND UNDERWEAR: a FEMALE.

Grand total...	Piece..	5	338	54.2	\$0.155	7	11	3	10	15	29	47	50	45	61	55	3	2												
	Time..	5	189	54.2	.134	1	3	3	11	6	21	21	70	75	130	59	64	56	4	3										
	Total..	5	527	54.2	.148	7	11	6	21	21	70	75	130	59	64	56	4	3												

a Establishments making both hosiery and underwear.

Table 74 shows the average rates of wages per hour, average full-time weekly earnings, and average and classified full-time hours per week of employees in the establishments in each State from which data were secured, by years, 1913 and 1914.

TABLE 74.—AVERAGE RATES OF WAGES PER HOUR, AVERAGE FULL-TIME WEEKLY EARNINGS, AND AVERAGE AND CLASSIFIED FULL-TIME HOURS PER WEEK IN EACH STATE, BY YEARS, 1913 AND 1914.

[The figures for both years are for identical establishments.]

## BOARDERS, HOSIERY AND UNDERWEAR: MALE.

State and number of establishments.	Year.	Em-ploy-ees.	Average full-time hours per week.	Average rate of wages per hour.	Average full-time weekly earnings.	Employees whose full-time hours per week were—						
						Under 48.	48 and under 51.	51 and under 54.	54.	Over 54 and under 57.	57 and under 60.	Over 60.
Georgia (3).....	1913	64	58.6	\$0.151	\$8.81							
	1914	69	58.6	.165	9.68					8	26	30
Illinois (2).....	1913	25	55.9	.229	12.75					8	29	32
	1914	41	56.1	.181	10.18			13			12	
Indiana (2).....	1913	105	55.0	.226	12.45					24	105	2
	1914	106	55.0	.246	13.55							
Massachusetts (3).....	1913	272	54.0	.218	11.77					272	106	
	1914	282	54.0	.226	12.22					282		
New Hampshire (2).....	1913	29	55.0	.190	11.02							
	1914	32	55.0	.218	11.99						29	
North Carolina (3).....	1913	49	59.4	.161	9.53					32		
	1914	53	59.4	.177	10.49					6		43
Pennsylvania (11).....	1913	368	55.1	.254	13.99						11	42
	1914	335	58.2	.164	8.78					368		
Tennessee (2).....	1913	75	58.2	.279	15.13					77	170	88
	1914	79	57.9	.152	8.78						69	6
Virginia (2).....	1913	38	57.3	.166	9.51						79	
	1914	42	57.6	.170	9.82					6	32	
Wisconsin (2).....	1913	53	55.0	.289	15.89						53	4

TABLE 74.—AVERAGE RATES OF WAGES PER HOUR, AVERAGE FULL-TIME WEEKLY EARNINGS, AND AVERAGE AND CLASSIFIED FULL-TIME HOURS PER WEEK IN EACH STATE, BY YEARS, 1913 AND 1914—Continued.

INSPECTORS AND FOLDERS, HOSIERY AND UNDERWEAR: FEMALE.

State and number of establishments.	Year.	Employees.	Average full-time hours per week.	Average rate of wages per hour.	Average full-time weekly earnings.	Employees whose full-time hours per week were—					
						Under 48.	48 and under 51.	51 and under 54.	54 and under 57.	57 and under 60.	Over 60.
Connecticut (3).....	1913	66	58.3	\$0.149	\$8.65				13	22	31
	1914	98	55.0	.148	8.12				98		
Georgia (3).....	1913	67	58.7	.115	6.79				8	23	36
	1914	52	58.9	.118	6.96				6	13	33
Indiana (2).....	1913	55	55.0	.130	7.16				55		
	1914	45	55.0	.141	7.74				45		
Massachusetts (3).....	1913	306	54.0	.143	7.71				306		
	1914	372	54.0	.155	8.39				372		
New Hampshire (2).....	1913	65	58.0	.150	8.70					65	
	1914	91	55.0	.162	8.89				91		
New York (17).....	1913	587	54.0	.157	8.46				587		
	1914	545	54.0	.162	8.75				545		
North Carolina (3).....	1913	29	59.8	.142	8.48					1	28
	1914	29	59.9	.146	8.76					1	28
Ohio (5).....	1913	70	53.8	.118	6.36		2	4	64		
	1914	61	52.5	.144	7.60	9		6	46		
Pennsylvania (9).....	1913	145	55.8	.141	7.88				111	34	
	1914	185	54.0	.145	7.81		18	167			
Tennessee (2).....	1913	37	58.5	.134	7.84					27	10
	1914	43	57.9	.132	7.62					43	
Wisconsin (4).....	1913	48	55.0	.151	8.32				48		
	1914	69	55.0	.155	8.53				60		
Other States (6).....	1913	38	55.2	.155	8.51		4	21	3	10	
	1914	58	55.1	.146	8.10			41		17	
Total (59).....	1913	1,513	55.1	.146	8.03	2	8	978	239	181	105
	1914	1,648	54.5	.153	8.35	9	24	1,171	309	74	61

KNITTERS, FOOTERS, OR TOPPERS, HOSIERY: MALE.

Georgia (3).....	1913	43	58.3	\$0.127	\$7.38				5	24	14
	1914	42	58.9	.121	7.10				1	20	21
New Hampshire (2).....	1913	33	58.0	.179	10.38					33	
	1914	28	55.0	.195	10.71				28		
Tennessee (2).....	1913	75	58.8	.132	7.75				46	29	
	1914	79	58.0	.119	6.89					79	
Virginia (2).....	1913	22	56.7	.156	8.80				12	10	
	1914	33	57.8	.143	8.29					33	
Other States (3).....	1913	16	56.8	.151	8.71				9	1	6
	1914	49	54.3	.167	9.08				46	1	2
Total (12).....	1913	189	58.1	.143	8.33				9	17	49
	1914	231	57.0	.142	8.06				46	29	23

KNITTERS, FOOTERS, OR TOPPERS, HOSIERY: FEMALE.

Connecticut (2).....	1913	111	59.1	\$0.157	\$9.25					52	59
	1914	134	55.0	.157	8.66				134		
Georgia (3).....	1913	130	57.3	.019	6.27				50	53	27
	1914	120	57.4	.114	6.54				41	51	28
Illinois (3).....	1913	166	54.6	.128	6.99				113	53	
	1914	174	53.8	.112	6.02	8	3	119		44	
Massachusetts (3).....	1913	195	54.0	.153	8.28				195		
	1914	187	54.0	.153	8.28				187		
New Hampshire (3).....	1913	132	58.0	.153	8.65					132	
	1914	151	55.0	.141	7.73				151		
North Carolina (3).....	1913	138	59.2	.089	5.23				23	115	
	1914	129	59.1	.099	5.84	7	28	7	21	38	91
Ohio (3).....	1913	63	51.0	.126	6.46				38	23	
	1914	63	52.2	.138	7.22	4			38	23	
Pennsylvania (8).....	1913	1,311	55.6	.166	9.22				1,078	233	
	1914	1,244	53.9	.167	8.98				446	798	
Tennessee (2).....	1913	186	58.6	.139	8.14					126	60
	1914	234	57.9	.147	8.53					234	
Virginia (2).....	1913	64	57.0	.121	6.93				20	44	
	1914	68	57.6	.112	6.47					68	
Wisconsin (2).....	1913	89	55.0	.163	8.99					89	
	1914	117	55.0	.163	8.99					117	
Other States (2).....	1913	128	54.4	.137	7.48				31	115	
	1914	136	54.6	.136	7.44				21	115	
Total (36).....	1913	2,713	56.0	.149	8.35	7	28	151	216	1,357	693
	1914	2,759	54.9	.150	8.19	12	3	624	1,008	558	435

TABLE 74.—AVERAGE RATES OF WAGES PER HOUR, AVERAGE FULL-TIME WEEKLY EARNINGS, AND AVERAGE AND CLASSIFIED FULL-TIME HOURS PER WEEK IN EACH STATE, BY YEARS, 1913 AND 1914—Continued.

KNITTERS, FULL-FASHIONED HOSIERY: MALE.

State and number of establishments.	Year.	Employees.	Average full-time hours per week.	Average rate of wages per hour.	Average full-time weekly earnings.	Employees whose full-time hours per week were—					
						Under 48.	48 and under 51.	51 and under 54.	54 and under 57.	57 and under 60.	Over 60.
Indiana (2).....	1913	227	55.0	\$0.364	\$20.02					227	
	1914	234	55.0	.394	21.67					234	
Pennsylvania (4).....	1913	194	55.1	.425	23.40					194	
	1914	229	54.6	.424	23.19				63	11	155
Other States (3).....	1913	44	55.9	.371	20.68					31	13
	1914	44	55.0	.384	21.15					44	
Total (9).....	1913	465	55.1	.390	21.49					452	13
	1914	507	54.8	.407	22.31				63	11	433

KNITTERS, "LADY HOSE": MALE.

Massachusetts (2).....	1913	113	54.0	\$0.192	\$10.37				113		
	1914	147	54.0	.192	10.39					147	
New Hampshire (2).....	1913	64	58.0	.180	10.42						64
	1914	20	55.0	.208	11.46					20	
Pennsylvania (2).....	1913	48	55.4	.239	13.23					48	
	1914	51	54.0	.214	11.58				51		
Other States (9).....	1913	67	58.0	.162	9.39					15	26
	1914	66	58.1	.187	10.85					10	32
Total (15).....	1913	292	56.0	.190	10.63				113	63	90
	1914	284	55.0	.196	10.79				198	30	32

KNITTERS, "LADY HOSE": FEMALE.

Pennsylvania (5).....	1913	62	55.3	\$0.142	\$7.84					62	
	1914	36	54.0	.189	10.18					36	
Wisconsin (2).....	1913	48	55.0	.147	8.08					48	
	1914	19	55.0	.164	9.00					19	
Other States (4).....	1913	66	56.4	.157	8.87					9	44
	1914	43	54.2	.153	8.29				9	23	10
Total (11).....	1913	176	55.6	.149	8.29				8	14	110
	1914	98	54.3	.168	9.12				9	59	29

LOOPERS, HOSIERY AND UNDERWEAR: FEMALE.

Connecticut (3).....	1913	97	58.1	\$0.178	\$10.34					18	46	33
	1914	106	55.0	.190	10.44					106		
Georgia (3).....	1913	89	59.0	.127	7.47					5	34	50
	1914	111	58.9	.133	7.81					5	47	59
Illinois (3).....	1913	91	56.6	.124	7.04				33		58	
	1914	110	54.9	.114	6.29	8	12	34			56	
Indiana (2).....	1913	119	55.0	.138	7.59					119		
	1914	119	55.0	.141	7.78					119		
Massachusetts (3).....	1913	413	54.0	.151	8.13				413			
	1914	491	54.0	.154	8.32					491		
Michigan (2).....	1913	81	53.9	.151	8.12					7	74	
	1914	79	53.9	.171	9.24				5	74		
New Hampshire (3).....	1913	128	58.0	.162	9.38						128	
	1914	147	55.0	.171	9.42						147	
New York (3).....	1913	93	54.0	.199	10.75					93		
	1914	85	54.0	.221	11.95					85		
North Carolina (3).....	1913	93	58.9	.104	6.14						73	
	1914	84	58.8	.113	6.62						73	
Ohio (3).....	1913	25	51.5	.171	8.82				12	7	6	
	1914	27	52.6	.150	7.90				21	6		
Pennsylvania (13).....	1913	936	55.5	.154	8.57						805	131
	1914	930	53.9	.167	8.98						805	131
Tennessee (2).....	1913	110	58.5	.133	7.76				193	737		
	1914	124	57.9	.125	7.23						82	28
Virginia (2).....	1913	45	57.2	.132	7.57						124	
	1914	61	57.7	.123	7.09						10	61
Wisconsin (2).....	1913	146	55.0	.158	8.68						146	
	1914	141	53.6	.158	8.53	19					122	
Total (47).....	1913	2,466	55.8	.151	8.41	12			47	586	1,123	514
	1914	2,615	54.8	.157	8.59	27	12		253	1,393	499	321

TABLE 74.—AVERAGE RATES OF WAGES PER HOUR, AVERAGE FULL-TIME WEEKLY EARNINGS, AND AVERAGE AND CLASSIFIED FULL-TIME HOURS PER WEEK IN EACH STATE, BY YEARS, 1913 AND 1914—Continued.

## MENDERS, FINE, HOSIERY: FEMALE.

State and number of establishments.	Year.	Em- ploy- ees.	Average full- time hours per week.	Average rate of wages per hour.	Average full- time weekly earn- ings.	Employees whose full-time hours per week were—						
						Under 48.	48 and under 51.	51 and under 54.	54. and under 57.	57 and under 60.	60.	Over 60.
Massachusetts (3).....	1913	88	54.0	\$0.124	\$6.71				88			
	1914	105	54.0	.148	7.98			105				
Pennsylvania (8).....	1913	83	55.1	.172	9.46				83			
	1914	92	54.0	.180	9.71			14	78			
Other States (16).....	1913	79	56.5	.132	7.45	2	5	19	16	14	20	
	1914	99	56.5	.130	7.37	4	23	23	28	21		
Total (27).....	1913	250	55.2	.142	7.86		2	5	107	99	14	23
	1914	296	54.8	.152	8.31			18	200	23	28	21

## MENDERS, ROUGH, HOSIERY: FEMALE.

State and number of establishments.	Year.	Em- ploy- ees.	Average full- time hours per week.	Average rate of wages per hour.	Average full- time weekly earn- ings.	Employees whose full-time hours per week were—						
						Under 48.	48 and under 51.	51 and under 54.	54. and under 57.	57 and under 60.	60.	Over 60.
Connecticut (3).....	1913	36	59.0	\$0.148	\$8.73				1	16	19	
	1914	48	55.0	.161	8.87				48			
Georgia (3).....	1913	79	58.4	.110	6.45				14	30	35	
	1914	82	58.5	.114	6.66				11	35	30	
Indiana (2).....	1913	134	55.0	.143	7.87				134			
	1914	125	55.0	.147	8.11				125			
Massachusetts (3).....	1913	109	54.0	.146	7.86				109			
	1914	117	54.0	.140	7.57				117			
New Hampshire (3).....	1913	71	58.0	.142	8.26				71			
	1914	60	55.0	.159	8.74				60			
Pennsylvania (9).....	1913	207	56.1	.173	9.70				150	57		
	1914	206	53.9	.169	9.09	1		27	178			
Tennessee (2).....	1913	78	58.5	.126	7.96				57	21		
	1914	41	58.0	.109	6.90				41			
Wisconsin (2).....	1913	81	55.0	.132	7.27				81			
	1914	77	55.0	.148	8.14				77			
Other States (12).....	1913	129	56.8	.124	7.00	8	13	24	12	14	58	
	1914	111	55.3	.144	7.92		29	38	37	7		
Total (39).....	1913	924	56.2	.142	8.00		8	13	333	392	245	133
	1914	867	55.1	.148	8.11	1	56	333	321	113	43	

## PRESS HANDS, HOSIERY AND UNDERWEAR: FEMALE.

State and number of establishments.	Year.	Em- ploy- ees.	Average full- time hours per week.	Average rate of wages per hour.	Average full- time weekly earn- ings.	Employees whose full-time hours per week were—						
						Under 48.	48 and under 51.	51 and under 54.	54. and under 57.	57 and under 60.	60.	Over 60.
New York (9).....	1913	101	54.0	\$0.152	\$8.21				101			
	1914	109	54.0	.160	8.65				109			
Other States (5).....	1913	139	54.3	.149	8.14	3			101	22	13	
	1914	135	54.1	.140	7.55				121	14		
Total (14).....	1913	240	54.2	.150	8.17	3			202	22	13	
	1914	244	54.1	.149	8.04				230	14		

## SEAMERS, FULL-FASHIONED HOSIERY: FEMALE.

State and number of establishments.	Year.	Em- ploy- ees.	Average full- time hours per week.	Average rate of wages per hour.	Average full- time weekly earn- ings.	Employees whose full-time hours per week were—						
						Under 48.	48 and under 51.	51 and under 54.	54. and under 57.	57 and under 60.	60.	Over 60.
Indiana (2).....	1913	131	55.0	\$0.148	\$8.16				131			
	1914	128	55.0	.152	8.37				128			
Pennsylvania (4).....	1913	143	55.1	.187	10.32				143			
	1914	156	53.9	.193	10.40			51	105			
Other States (3).....	1913	19	55.9	.190	10.64				13	6		
	1914	22	55.0	.155	8.50				22			
Total (9).....	1913	293	55.1	.170	9.38				287	6		
	1914	306	54.4	.173	9.41			51	105	150		

TABLE 74.—AVERAGE RATES OF WAGES PER HOUR, AVERAGE FULL-TIME WEEKLY EARNINGS, AND AVERAGE AND CLASSIFIED FULL-TIME HOURS PER WEEK IN EACH STATE, BY YEARS, 1913 AND 1914—Continued.

## TOPPERS, FULL-FASHIONED HOSIERY: FEMALE.

State and number of establishments.	Year.	Em- ploy- ees.	Average full- time hours per week.	Average rate of wages per hour.	Average full- time weekly earn- ings.	Employees whose full-time hours per week were—						
						Under 48.	48 and under 51.	51 and under 54.	54. and under 57.	57 and under 60.	60.	Over 60.
Pennsylvania (3).....	1913	212	55.1	\$0.166	\$9.15				212			
	1914	244	53.9	.157	8.47			111	133			
Other States (3).....	1913	236	55.2	.140	7.74				222		14	
	1914	236	54.9	.144	7.90	2			234			
Total (6).....	1913	448	55.1	.152	8.41				434	14		
	1914	480	54.4	.151	8.17	2		111	133	234		

## WELTERS, HOSIERY AND UNDERWEAR: FEMALE.

State and number of establishments.	Year.	Em- ploy- ees.	Average full- time hours per week.	Average rate of wages per hour.	Average full- time weekly earn- ings.	Employees whose full-time hours per week were—						
						Under 48.	48 and under 51.	51 and under 54.	54. and under 57.	57 and under 60.	60.	Over 60.
Georgia (3).....	1913	25	58.6	\$0.117	\$6.86				2	12	11	
	1914	26	58.6	.133	7.79				2	16	11	
Massachusetts (3).....	1913	132	54.0	.140	7.57				132			
	1914	128	54.0	.144	7.77				128			
New York (6).....	1913	34	54.0	.191	10.33				34			
	1914	49	54.0	.188	10.16				49			
Pennsylvania (6).....	1913	64	55.7	.179	9.97				55	9		
	1914	73	54.0	.198	10.70				73			
Other States (12).....	1913	74	57.6	.196	7.78				5	18	26	25
	1914	67	56.9	.150	8.47	1			3	25	18	20
Total (30).....	1913	329	55.5	.150	8.31				171	75	47	36
	1914	346	54.9	.162	8.86	1			253	27	34	31

## WINDERS, HOSIERY AND UNDERWEAR: FEMALE.

State and number of establishments.	Year.	Em- ploy- ees.	Average full- time hours per week.	Average rate of wages per hour.	Average full- time weekly earn- ings.	Employees whose full-time hours per week were—						
						Under 48.	48 and under 51.	51 and under 54.	54. and under 57.	57 and under 60.	60.	Over 60.
Connecticut (3).....	1913	35	57.6	\$0.148	\$8.55					10	17	8
	1914	39	55.0	.164	9.01					39		
Indiana (2).....	1913	69	55.0	.154	8.47					69		
	1914	71	55.0	.153	8.52					71		
Massachusetts (3).....	1913	259	54.0	.142	7.64				259			
	1914	377	54.0	.138	7.44				377			
New Hampshire (4).....	1913	60	58.0	.148	8.57					60		
	1914	76	55.0	.152	8.30				76			
New York (16).....	1913	468	54.0	.178	9.59				468			
	1914	436	54.0	.177	9.56				436			
Ohio (5).....	1913	31	53.8	.143	7.69				1	1	28	
	1914	31	53.4	.129	6.89	2			1			
Pennsylvania (11).....	1913	238	55.6	.137	7.63				193	45		
	1914	279	53.9	.149	8.04				67	212		
Wisconsin (4).....	1913	30	53.9	.177	9.62	2	2			26		
	1914	35	52.8	.133	7.11	6				29		
Other States (5).....	1913	35	55.9	.116	6.48				1	15	5	3
	1914	37	56.5	.124	6.99				1	11		
Total (53).....	1913	1,225	54.7	.156	8.52	2	3		2	771	303	133
	1914	1,381	54.1	.154	8.35	8			69	1,064	215	25

An attempt was made to gather information concerning the volume and regularity of employment in this industry during the year ended March, 1914, and the amount paid out in wages during the same period. Such figures do not, of course, show the number of unemployed desiring work in an industry. Furthermore, the loss of employment in an establishment does not necessarily mean unemployment, as the employees may find work elsewhere in the same or some other industry. The material presented, while not strictly data concerning unemployment, may be accepted, however, as indicative of the amount of unemployment in the industry covered.

Data were obtained from 39 establishments covering the number of days the plant was in operation, the number of employees on the pay roll, and the amount of the pay roll for each pay period for a year; also a statement of the number of days the plant was closed during the year.

TABLE 75.—AVERAGE DAYS ESTABLISHMENTS WERE IN OPERATION, NUMBER OF EMPLOYEES, TOTAL AMOUNT OF PAY ROLLS, AND AVERAGE EARNINGS PER EMPLOYEE IN TWO WEEKS, FOR ONE YEAR, BY TWO-WEEK PERIODS.

HOSIERY, 35 ESTABLISHMENTS.

Two-week period ending approximately—	Average number of days in operation.	Employees.	Total amount of pay rolls.	Average earnings per employee in two weeks.
1913.				
April 12.....	11.9	15,052	\$245,093.20	\$16.28
April 26.....	11.9	14,997	244,084.58	16.28
May 10.....	12.0	14,815	249,708.91	16.25
May 24.....	11.6	14,818	236,824.84	15.98
June 7.....	11.2	14,990	222,494.50	14.84
June 21.....	11.9	15,128	242,302.30	16.02
July 5.....	10.5	14,921	204,489.69	13.70
July 19.....	10.9	14,990	222,974.73	14.87
August 2.....	11.8	14,910	235,095.21	15.77
August 16.....	11.9	14,881	236,213.94	15.87
August 30.....	11.5	14,821	228,320.15	15.41
September 13.....	11.5	14,830	228,408.31	15.06
September 27.....	11.9	14,899	244,505.75	16.41
October 11.....	11.9	14,940	253,500.05	16.97
October 25.....	11.9	14,986	251,099.91	16.89
November 8.....	12.0	14,993	251,849.53	16.80
November 22.....	11.7	14,975	248,317.56	16.58
December 6.....	11.1	14,971	239,807.06	16.02
December 20.....	11.1	14,923	245,442.51	16.45
1914.				
January 3.....	9.0	14,167	188,093.71	13.28
January 17.....	11.6	14,519	237,008.52	16.32
January 31.....	11.7	14,938	244,914.97	16.40
February 14.....	11.7	14,479	240,790.20	16.63
February 28.....	11.7	14,749	239,877.72	15.99
March 14.....	11.9	14,899	244,911.77	16.44
March 28.....	12.0	15,105	251,228.00	16.63
Average.....	11.5	14,873	236,975.29	15.93

HOSIERY AND UNDERWEAR, 4 ESTABLISHMENTS.

1913.				
April 12.....	12.0	4,308	\$72,892.75	\$16.92
April 26.....	11.8	4,329	70,167.63	16.21
May 10.....	12.0	4,331	71,914.94	16.60
May 24.....	12.0	4,333	72,540.86	16.74
June 7.....	10.8	4,353	64,056.51	14.72
June 21.....	12.0	4,386	73,362.95	16.73
July 5.....	7.5	3,973	55,349.32	13.93
July 19.....	12.0	4,251	71,139.44	16.73
August 2.....	12.0	4,283	70,514.98	16.46
August 16.....	10.5	4,275	65,886.80	15.41
August 30.....	11.8	4,266	67,520.06	15.83
September 13.....	11.0	4,284	66,645.50	15.56
September 27.....	12.0	4,400	70,097.21	17.29
October 11.....	12.0	4,444	74,962.54	16.87
October 25.....	11.8	4,465	70,395.41	15.77
November 8.....	12.0	4,466	74,047.43	16.58
November 22.....	12.0	4,547	74,279.82	16.34
December 6.....	10.5	4,415	67,005.51	15.18
December 20.....	12.0	4,435	73,472.50	16.57
1914.				
January 3.....	9.0	4,274	59,934.96	14.02
January 17.....	12.0	4,367	71,428.76	16.36
January 31.....	12.0	4,353	71,101.54	16.22
February 14.....	12.0	4,396	71,492.71	16.26
February 28.....	11.8	4,357	66,610.79	15.29
March 14.....	12.0	4,362	72,407.09	16.60
March 28.....	12.0	4,321	72,358.97	16.75
Average.....	11.5	4,346	69,907.19	16.07

Table 75 shows the average number of days in operation, the total number of employees, the total amount of pay roll, and the average earnings per employee in two-week periods for 35 hosiery establishments and 4 establishments manufacturing both hosiery and underwear. In this table the data have been reduced to a two-week basis. This was necessary because in a considerable number of establishments the regular pay-roll period covers two weeks and it was not practicable to separate the figures so as to show them for one week. Hence, for establishments which have a weekly pay roll the figures for two consecutive pay rolls were combined so as to bring all to the same base. The amounts of the two weekly pay rolls were added, and the number of employees used was the average of the numbers in the two weeks. The figures show a striking uniformity in the volume of employment in the industry in the 12 months covered. It will be noticed that there is very little variation either in the average number of days in operation, the number of employees, or the average earnings per employee, except as the latter are affected by the number of days in operation. For example, for the period ending July 5 and the period ending January 3 it will be seen that the earnings per employee are considerably lower than for other periods, but it will be observed that both of these periods include holidays which are almost universally observed, and the average days in operation were less than in other periods.



# CHAPTER VII.

## FOREIGN TRADE.

### IMPORTS OF HOSIERY.

The importations of hosiery into the United States consist chiefly of full-fashioned hosiery of cotton for women and socks for children. A small amount of fancy full-fashioned half hose for men is imported. Most of the hosiery imports are from the Chemnitz district in Germany. The imports of silk hosiery for women are small, practically all that is imported being very high-class hand-embroidered full-fashioned stockings. A large amount of socks for children is imported. Children's socks manufactured in Europe are knit on a flat machine that permits the making of vertical stripes, as well as the making of all kinds of fancy designs for the top of the sock, which is the principal factor in selling it. The American manufacturer, using the more speedy circular seamless machine, can make only circular and not vertical stripes. This prevents the production of fancy designs. Some cut and sewed hosiery, principally socks for children, are imported. They are made from a knitted fabric, cut by shears, and then sewed together.

The importations of cotton hosiery have decreased for several years. The quantity and value of the cotton hosiery imported for consumption into the United States during the six fiscal years 1909 to 1914, inclusive, are shown in Table 76.

TABLE 76.—QUANTITY AND VALUE OF HOSIERY MADE OF COTTON OR OTHER VEGETABLE FIBER IMPORTED FOR CONSUMPTION DURING THE FISCAL YEARS ENDING JUNE 30, 1909-1914.

Articles.	1909	1910	1911	1912	1913	1914
Selvaged, fashioned, narrowed, or shaped wholly or in part by knitting machines or frames, or knit by hand, including such as are commercially known as seamless or clocked stockings, hose and half hose, finished or unfinished:						
Valued at not more than \$1 per dozen pairs.....	2,914,982	2,046,376	1,091,484	846,686	640,793	a 60,310
Valued at more than \$1 and not more than \$1.50 per dozen pairs.....	1,056,005	1,106,616	733,369	558,523	422,364	a 58,909
Valued at more than \$1.50 and not more than \$2 per dozen pairs.....	995,822	1,105,185	817,150	588,402	579,427	a 116,043
Valued at more than \$2 and not more than \$3 per dozen pairs.....	58,315	65,227	48,336	26,869	25,682	a 3,714
Valued at more than \$3 and not more than \$5 per dozen pairs.....	14,951	14,807	10,609	7,235	6,712	a 999
Valued at more than \$5 per dozen pairs.....	3,994	4,681	3,135	3,183	3,345	a 702
Valued at not more than \$0.70 per dozen pairs.....						b 143,607
Valued at more than \$0.70 and not more than \$1.20 per dozen pairs.....						b 675,498
Valued at more than \$1.20 per dozen pairs.....						b 787,079
Made on knitting machines or frames, not otherwise provided for (cut-out hose).....	23,933	134,891	229,046	318,743	350,658	{ a 13,213 b 334,297
Total.....	5,068,002	4,477,783	2,933,129	2,349,641	2,028,981	2,194,371

a Period from July 1 to Oct. 3, 1913.

b Period from Oct. 4, 1913, to June 30, 1914.

## FOREIGN TRADE.

TABLE 76.—QUANTITY AND VALUE OF HOSIERY MADE OF COTTON OR OTHER VEGETABLE FIBER IMPORTED FOR CONSUMPTION DURING THE FISCAL YEARS ENDING JUNE 30, 1909-1914—Continued.

Articles.	1909	1910	1911	1912	1913	1914
Selvaged, fashioned, narrowed, or shaped wholly or in part by knitting machines or frames, or knit by hand, including such as are commercially known as seamless or clocked stockings, hose and half hose, finished or unfinished:						
Valued at not more than \$1 per dozen pairs.....	\$2,777,715	\$1,901,121	\$986,841	\$754,704	\$572,397	a \$55,320
Valued at more than \$1 and not more than \$1.50 per dozen pairs.....	1,475,472	1,526,256	1,006,237	762,051	586,652	a 80,117
Valued at more than \$1.50 and not more than \$2 per dozen pairs.....	1,881,515	2,056,759	1,516,921	1,099,172	1,099,517	a 225,853
Valued at more than \$2 and not more than \$3 per dozen pairs.....	153,215	173,517	123,807	69,828	67,090	a 9,622
Valued at more than \$3 and not more than \$5 per dozen pairs.....	58,088	57,727	40,483	28,629	26,326	a 3,986
Valued at more than \$5 per dozen pairs.....	27,969	31,337	22,173	23,228	23,667	a 4,984
Valued at not more than \$0.70 per dozen pairs.....						b 90,563
Valued at more than \$0.70 and not more than \$1.20 per dozen pairs.....						b 690,130
Valued at more than \$1.20 per dozen pairs.....						b 1,610,206
Made on knitting machines or frames, not otherwise provided for (cut-out hose).....	16,947	78,383	128,507	174,788	178,265	{ a 8,495 b 170,402
Total.....	6,390,921	5,825,100	3,824,969	2,912,400	2,553,914	2,949,678

a Period from July 1 to Oct. 3, 1913.

b Period from Oct. 4, 1913, to June 30, 1914.

The statistics of imports that appear in this report do not include very small imports from the Philippines, on which no duty is paid, nor very small imports from Cuba, which are admitted at 20 per cent less than the regular tariff rates.

### RATES OF DUTY UNDER RECENT TARIFF ACTS.

In examining Table 76 it should be remembered that three tariff acts were in force during the six fiscal years from 1909 to 1914. The act of 1897 (Dingley Act) remained in effect until August 4, 1909. The act of 1909 (Payne-Aldrich Act) was in effect from August 5, 1909, to October 3, 1913. The act of 1913 (Underwood-Simmons Act) went into effect October 4, 1913. The rates of duty on cotton hosiery under these acts are shown in Table 77.

TABLE 77.—RATES OF DUTY ON COTTON HOSIERY UNDER TARIFF ACTS OF 1897, 1909, AND 1913.

Valued, per dozen pairs, at—	Dingley Act, July 24, 1897, to Aug. 4, 1909.	Payne-Aldrich Act, Aug. 5, 1909, to Oct. 3, 1913.	Underwood-Simmons Act, Oct. 4, 1913.
Not more than \$1.....	50 cents per dozen+15 per cent.	70 cents per dozen+15 per cent.	Per cent.
More than \$1 and not more than \$1.50.	60 cents per dozen+15 per cent.	85 cents per dozen+15 per cent.	
More than \$1.50 and not more than \$2.	70 cents per dozen+15 per cent.	90 cents per dozen+15 per cent.	
More than \$2 and not more than \$3.	\$1.20 per dozen+15 per cent.	\$1.20 per dozen+15 per cent.	
More than \$3 and not more than \$5.	\$2 per dozen+15 per cent.	\$2 per dozen+15 per cent.	
More than \$5.	55 per cent.	55 per cent.	
Not more than 70 cents.			30
More than 70 cents and not more than \$1.20.			50
More than \$1.20.	30 per cent.	30 per cent.	20
Not otherwise provided for (cut-out hose).			

Table 76, which states the quantity and value of importations of hosiery, shows that the importations during the last full year that the Dingley Act was in force, the fiscal year ending June 30, 1909, amounted to \$6,390,921, and were much larger than for any of the years following.

As shown by the Census of Manufactures, the production of cotton hosiery in the United States amounted in the calendar year 1909, to \$55,909,987.<sup>a</sup> The importations of such hosiery in 1909, amounting to \$6,390,921, were 11.43 per cent of the production in 1909, but they have decreased to less than one-half of what they were in that year. The importations in the fiscal year 1914, amounting to \$2,949,678, were only 5.28 per cent of the production in 1909. Though no statistics regarding the production in later years are available, it is well known that many old hosiery mills have increased their output and many new hosiery mills have begun operations in the last five years. Therefore, the percentage of importations of hosiery compared with the production in the United States is now smaller than 5.28 per cent.

The imports of cotton hosiery for consumption during the fiscal year 1914 amounted to \$2,949,678, and those of other cotton knit goods, except gloves, to \$341,973, the total being \$3,291,651. The amount of exports is not given separately for hosiery and other knit goods, but the exports of all cotton knit goods amounted to \$2,546,822 during the fiscal year 1914.

The reports of the Bureau of the Census do not show the production of full-fashioned hosiery separately from the production of seamless hosiery. It is known, however, that in the United States the production of seamless hosiery is very much greater than the production of full-fashioned hosiery. Davison's Hosiery and Knit Goods Trade Directory shows that in 1914 there were in the United States 93 mills knitting full-fashioned hosiery and 647 knitting seamless hosiery.

Comparatively little seamless hosiery is made in Europe, and practically none of it, except hose for infants, is imported into the United States. The cost of labor in the manufacture of seamless hosiery is comparatively small, as the circular machines on which such hosiery is knit are largely automatic, and are operated by girls who each attend to from 4 to 16 machines. For this reason the labor cost is so low that very little seamless hosiery has been imported into the United States under any tariff, including the act of 1913. The machines for making seamless hosiery are nearly all made in America. Foreign manufacturers of hosiery have not invested largely in such machines, as there is little demand for seamless hosiery in the countries to which they export goods.

In the manufacture of full-fashioned hosiery the labor cost is higher in proportion to the total cost than in the manufacture of seamless hosiery. Each full-fashioned machine is attended by a man, who is a skilled worker and who employs a helper. As labor is cheaper in Europe than in America, foreign manufacturers of full-fashioned cotton hosiery are able to compete with the manufacturers in the United States. Nearly all of the importations of hosiery are of the full-fashioned style and made of cotton, which sells at popular prices 25 and 50 cents a pair at retail. The increase in the importations under the tariff act of 1913 has been almost entirely in this class of goods.

<sup>a</sup> Thirteenth Census, Manufactures, Vol. VIII, p. 393.

Full-fashioned hosiery is preferred by many people, especially women, because it fits better than does seamless hosiery. While under the new tariff the imports of seamless hosiery continued to be practically nothing, the imports of full-fashioned hosiery made of cotton somewhat increased, for the reason that some people will buy full-fashioned hosiery at 25 to 50 cents rather than pay the same price for seamless hosiery. To some extent, therefore, American manufacturers of cotton hosiery, whether seamless or full fashioned, had a slightly increased foreign competition from the time that the new tariff act went into effect (Oct. 4, 1913) to the beginning of the war in Europe on about August 1, 1914, but, as stated before, this increase was insignificant when compared with the total production in the United States.

No tariff act has ever made a distinction between the rate of duty on full-fashioned hosiery and seamless hosiery.

#### IMPORTS DURING RECENT YEARS.

During the fiscal year 1913 the importations for consumption of cotton hosiery were \$2,553,914, and during the fiscal year 1914 they were \$2,949,678, an increase of \$395,764, or 15.5 per cent. This increase may be accounted for in part by the lower duties that prevailed for about nine months from October 4, 1913, to June 30, 1914, and in part by the fact that in the fiscal year ending June 30, 1913, foreign goods were held back from entry into the United States to some extent in anticipation of lower rates of duty. The imports of hosiery for consumption in the fiscal year 1914 were much less than in 1909, 1910, 1911, or (in respect to quantity) 1912.

Notwithstanding the fact that under the Payne-Aldrich Act the equivalent ad valorem rates of duty on low-priced hosiery were higher than on the higher priced hosiery,<sup>a</sup> the bulk of the importations under that act was of the grade of hosiery valued at \$2 or less per dozen. Under the Payne-Aldrich Act, as well as under the Underwood-Simmons Act, a large part of the importations of hosiery consisted of full-fashioned socks for children or infants, which are not manufactured at all in the United States.

The quantity and value of general imports of cotton hosiery into the United States from specified countries during the five fiscal years from 1910 to 1914, inclusive, are shown in Table 78.

TABLE 78.—QUANTITY AND VALUE OF GENERAL IMPORTS OF COTTON STOCKINGS, HOSE, AND HALF HOSE DURING THE FISCAL YEARS ENDED JUNE 30, 1910-1914, BY COUNTRIES.

Countries from which imported.	Dozen pairs. <sup>b</sup>				Value.				
	1911	1912	1913	1914	1910	1911	1912	1913	1914
France.....	8,934	6,572	7,387	8,977	\$56,214	\$30,484	\$28,882	\$30,185	\$35,683
Germany.....	2,718,772	2,202,505	2,131,678	2,375,494	5,705,073	3,538,592	2,713,813	2,631,218	3,050,939
Japan.....	97	7	4	14	813	62	11	6	24
Spain.....	8,520	3,409	687	12,364	6,148	4,044	1,730	355	6,068
Switzerland.....	42	2	.....	.....	574	158	3	.....	.....
United Kingdom:									
England.....	13,493	13,646	14,301	17,381	44,363	39,619	39,826	41,006	42,942
Scotland.....	2	4	12	1	37	10	3	48	6
Ireland.....	138	113	149	222	1,470	490	590	790	718
Other countries.....	1,479	991	223	4,948	711	1,724	1,310	236	8,265
Total.....	2,731,477	2,227,219	2,154,441	2,419,401	5,815,403	3,615,153	2,786,168	2,703,841	3,144,645

<sup>a</sup> See average ad valorem rates of duty in Table 80 on p. 225 of this report.

<sup>b</sup> Quantities not stated prior to 1911.

The difference between the total for each year shown in this table and the total for each year shown in Table 76 (p. 219) is accounted for by the fact that this table shows the importations for immediate consumption plus those entered in bonded warehouses, while the other table shows the importations for immediate consumption plus those withdrawn from bonded warehouses.

It will be observed that the bulk of the importations are from Germany. In the fiscal year 1913 the value of hosiery imported from that country was 97.31 per cent of the whole; in the fiscal year 1914, 97.02 per cent. Most of the remainder was imported from France and England.

During the fiscal year 1915 the importations of cotton hosiery decreased 1,300,507 dozen pairs, valued at \$1,496,781. The importation from Germany was 1,252,538 dozen pairs, valued at \$1,417,124.

Table 79 shows the importations of cotton hosiery of different classified values during the 21 fiscal years from 1894 to 1914, during which period the tariff acts of 1890, 1894, 1897, 1909, and 1913 were in force.

TABLE 79.—COTTON STOCKINGS, HOSE AND HALF HOSE, SELVEDGED, FASHIONED, NARROWED, OR SHAPED WHOLLY OR IN PART BY KNITTING MACHINES OR FRAMES, OR KNIT BY HAND, INCLUDING SUCH AS ARE COMMERCIALY KNOWN AS SEAMLESS OR CLOCKED STOCKINGS, HOSE, OR HALF HOSE, FINISHED OR UNFINISHED, IMPORTED FOR CONSUMPTION DURING THE FISCAL YEARS ENDED JUNE 30, 1894 TO 1913.

## TARIFF ACT OF 1890.

Valued not more than 60 cents per dozen pairs.

Fiscal year ended June 30—	Rate of duty.	Quantity.	Value.	Duty collected.	Average value per dozen pairs.	Average ad valorem rate of duty.
1894.....	20 cents per dozen and 20 per cent.	Dozen pairs. 941,388	\$551,541	\$298,586	\$0.50	Per cent. 54.14
1895.....	do.....	156,696	90,889	49,517	.58	54.48

Valued more than 60 cents and not more than \$2 per dozen pairs.

1894.....	50 cents per dozen and 30 per cent.	2,390,093	\$2,853,817	\$2,051,192	\$1.19	71.88
1895.....	do.....	175,855	195,200	146,488	1.11	75.08

Valued more than \$2 and not more than \$4 per dozen pairs.

1894.....	75 cents per dozen and 40 per cent.	68,926	\$184,447	\$125,473	\$2.66	68.03
1895.....	do.....	2,429	6,761	4,526	2.78	66.90
1897.....	do.....	293	886	574	3.03	64.76

Valued more than \$4 per dozen pairs.

1894.....	\$1 per dozen and 40 per cent.	7,345	\$43,939	\$24,921	\$5.98	56.72
1895.....	do.....	295	1,971	1,083	6.68	54.97

## TARIFF ACT OF 1894.

All values.

1895.....	50 per cent.....	5,485,368	\$5,798,552	\$2,899,276	\$1.066	50.00
1896.....	do.....	5,181,506	5,605,241	2,802,621	1.08	50.00
1897.....	do.....	5,387,960	5,483,996	2,741,998	1.02	50.00
1898.....	do.....	326,075	337,678	168,839	1.04	50.00

TABLE 79.—COTTON STOCKINGS, HOSE AND HALF HOSE, SELVEDGED, FASHIONED, NARROWED, OR SHAPED WHOLLY OR IN PART BY KNITTING MACHINES OR FRAMES, OR KNIT BY HAND, INCLUDING SUCH AS ARE COMMERCIALY KNOWN AS SEAMLESS OR CLOCKED STOCKINGS, HOSE, OR HALF HOSE, FINISHED OR UNFINISHED, IMPORTED FOR CONSUMPTION DURING THE FISCAL YEARS ENDED JUNE 30, 1894 TO 1913—Continued.

## TARIFF ACTS OF 1897 AND 1909.

Valued not more than \$1 per dozen pairs.

Fiscal year ended June 30—	Rate of duty.	Quantity.	Value.	Duty collected.	Average value per dozen pairs.	Average ad valorem rate of duty.
1898.....	50 cents per dozen and 15 per cent.	Dozen pairs. 1,729,160	\$1,533,153	\$1,094,552	\$0.887	Per cent. 71.40
1899.....	do.....	2,115,099	1,922,589	1,345,938	.909	70.01
1900.....	do.....	2,138,003	1,977,321	1,365,600	.925	69.06
1901.....	do.....	1,642,889	1,576,356	1,057,898	.959	67.11
1902.....	do.....	1,841,672	1,749,592	1,183,275	.95	67.63
1903.....	do.....	1,992,685	1,893,048	1,280,300	.95	67.63
1904.....	do.....	2,231,380	2,142,013	1,436,992	.959	67.09
1905.....	do.....	2,342,901	2,236,114	1,500,868	.954	67.39
1906.....	do.....	2,501,679	2,342,844	1,602,266	.936	68.39
1907.....	do.....	2,449,278	2,350,250	1,577,176	.95	67.11
1908.....	do.....	1,879,988	1,817,305	1,212,590	.967	66.72
1909.....	do.....	2,914,982	2,777,715	1,874,148	.953	67.47
1910.....	70 cents per dozen and 15 per cent.	628,801	599,365	404,305	.953	67.46
1911.....	do.....	1,417,575	1,301,756	1,187,565	.918	91.23
1912.....	do.....	1,091,485	986,841	912,066	.904	92.42
1913.....	do.....	846,686	754,704	705,886	.891	93.53
1913.....	do.....	640,793	572,397	534,415	.893	93.36

Valued more than \$1 and not more than \$1.50 per dozen pairs.

1898.....	60 cents per dozen and 15 per cent.	586,875	\$751,992	\$465,375	\$1.28	61.64
1899.....	do.....	696,627	902,420	553,340	1.30	61.32
1900.....	do.....	744,074	948,215	588,677	1.27	62.08
1901.....	do.....	957,951	1,255,349	763,073	1.31	60.78
1902.....	do.....	996,677	940,668	565,106	1.31	60.08
1903.....	do.....	698,668	929,923	558,690	1.33	60.08
1904.....	do.....	910,993	1,249,312	738,963	1.37	58.72
1905.....	do.....	955,115	1,312,551	769,950	1.37	58.66
1906.....	do.....	1,052,835	1,463,286	851,194	1.39	58.17
1907.....	do.....	1,155,694	1,600,635	933,512	1.37	58.32
1908.....	do.....	1,347,873	1,852,263	1,086,564	1.37	58.66
1909.....	do.....	1,056,005	1,475,472	854,924	1.40	57.94
1910.....	do.....	279,085	380,082	224,463	1.36	59.06
1911.....	85 cents per dozen and 15 per cent.	827,531	1,146,174	875,328	1.39	76.37
1912.....	do.....	733,369	1,006,236	774,300	1.37	76.95
1913.....	do.....	558,523	762,051	589,052	1.36	77.30
1913.....	do.....	422,364	586,652	447,007	1.39	72.20

Valued more than \$1.50 and not more than \$2 per dozen pairs.

1898.....	70 cents per dozen and 15 per cent.	341,014	\$633,125	\$333,679	\$1.86	52.70
1899.....	do.....	392,847	731,371	384,699	1.86	52.60
1900.....	do.....	481,150	898,179	471,532	1.87	52.50
1901.....	do.....	748,961	1,412,656	732,461	1.89	51.85
1902.....	do.....	747,323	1,432,186	737,968	1.92	51.53
1903.....	do.....	871,435	1,665,880	859,886	1.91	51.62
1904.....	do.....	803,202	1,535,955	792,635	1.90	51.62
1905.....	do.....	802,149	1,511,903	788,290	1.88	52.14
1906.....	do.....	965,349	1,865,238	955,530	1.93	51.23
1907.....	do.....	1,330,227	2,557,341	1,314,760	1.92	51.41
1908.....	do.....	1,423,546	2,701,166	1,401,657	1.90	51.89
1909.....	do.....	995,322	1,881,515	979,303	1.89	52.05
1910.....	do.....	182,385	347,629	179,814	1.91	51.73
1911.....	90 cents per dozen and 15 per cent.	922,800	1,709,130	1,086,890	1.85	63.59
1912.....	do.....	517,150	1,516,921	962,973	1.86	63.48
1913.....	do.....	588,402	1,099,172	694,437	1.87	63.18
1913.....	do.....	579,427	1,099,517	686,412	1.90	62.43



TABLE 79.—COTTON STOCKINGS, HOSE AND HALF HOSE, SELVEDGED, FASHIONED, NARROWED, OR SHAPED WHOLLY OR IN PART BY KNITTING MACHINES OR FRAMES, OR KNIT BY HAND, INCLUDING SUCH AS ARE COMMERCIALY KNOWN AS SEAMLESS OR CLOCKED STOCKINGS, HOSE, OR HALF HOSE, FINISHED OR UNFINISHED, IMPORTED FOR CONSUMPTION DURING THE FISCAL YEARS ENDED JUNE 30, 1894 TO 1913—Continued.

TARIFF ACTS OF 1897 AND 1909—Continued.  
Valued more than \$2 and not more than \$3 per dozen pairs.

Fiscal year ended June 30—	Rate of duty.	Quantity.	Value.	Duty collected.	Average value per dozen pairs.	Average ad valorem rate of duty.
1898.....	\$1.20 per dozen and 15 per cent.	Dozen pairs. 66,413	\$168,971	\$105,040	\$2.54	Per cent. 62.1
1899.....	do.....	72,967	187,076	115,610	2.56	61.80
1900.....	do.....	32,223	215,556	131,001	2.62	60.77
1901.....	do.....	118,129	317,153	189,328	2.68	59.69
1902.....	do.....	144,533	388,781	231,757	2.69	59.61
1903.....	do.....	165,333	450,837	266,025	2.73	59.01
1904.....	do.....	108,630	292,741	174,268	2.69	59.52
1905.....	do.....	90,902	244,982	145,902	2.69	59.56
1906.....	do.....	107,541	288,185	172,277	2.68	59.78
1907.....	do.....	131,433	354,189	210,848	2.69	59.53
1908.....	do.....	111,282	291,830	177,313	2.62	60.75
1909.....	do.....	58,315	153,215	92,960	2.63	60.11
1910.....	do.....	65,227	173,517	104,300	2.66	60.67
1911.....	do.....	48,336	123,807	76,575	2.56	61.85
1912.....	do.....	26,869	69,829	42,717	2.60	61.17
1913.....	do.....	28,682	67,090	40,882	2.62	60.94

Valued more than \$3 and not more than \$5 per dozen pairs.

1898.....	\$2 per dozen and 15 per cent.	22,329	\$87,224	\$57,736	\$3.90	66.19
1899.....	do.....	21,103	81,493	54,430	3.86	66.79
1900.....	do.....	22,760	88,794	58,851	3.90	66.28
1901.....	do.....	33,041	133,935	86,173	4.05	64.33
1902.....	do.....	38,606	153,807	100,282	3.98	65.20
1903.....	do.....	45,376	181,232	117,937	3.99	65.08
1904.....	do.....	32,574	132,393	85,008	4.06	64.21
1905.....	do.....	22,508	89,351	58,423	3.97	65.36
1906.....	do.....	26,135	104,014	67,871	3.98	65.26
1907.....	do.....	28,578	114,626	74,350	4.01	64.86
1908.....	do.....	34,214	132,717	88,336	3.88	66.56
1909.....	do.....	14,951	55,088	38,616	3.89	66.48
1910.....	do.....	14,807	57,727	38,274	3.90	66.30
1911.....	do.....	10,609	40,483	27,289	3.82	67.41
1912.....	do.....	7,235	28,629	18,764	3.96	65.54
1913.....	do.....	6,712	26,326	17,374	3.92	65.99

Valued more than \$5 per dozen pairs.

1898.....	55 per cent.	8,230	\$51,935	\$28,564	\$6.31	55.00
1899.....	do.....	8,521	57,924	31,858	6.80	55.00
1900.....	do.....	11,270	64,580	41,019	6.62	55.00
1901.....	do.....	17,085	100,619	55,340	5.89	55.00
1902.....	do.....	17,918	109,894	60,442	6.13	55.00
1903.....	do.....	17,622	116,337	63,985	6.60	55.00
1904.....	do.....	10,788	70,567	38,812	6.54	55.00
1905.....	do.....	4,238	28,997	15,948	6.84	55.00
1906.....	do.....	5,785	40,009	22,008	6.92	55.00
1907.....	do.....	6,380	42,356	23,290	6.64	55.00
1908.....	do.....	6,428	41,704	22,637	6.49	55.00
1909.....	do.....	3,994	27,969	15,383	7.00	55.00
1910.....	do.....	4,681	31,337	17,235	6.69	55.00
1911.....	do.....	3,135	22,173	12,195	7.07	55.00
1912.....	do.....	3,183	23,228	12,775	7.20	55.00
1913.....	do.....	3,345	23,667	13,017	7.07	55.00

TABLE 80.—COTTON STOCKINGS, HOSE AND HALF HOSE, MADE ON KNITTING MACHINES OR FRAMES AND NOT SPECIALLY PROVIDED FOR (CUT-OUT HOSE), IMPORTED FOR CONSUMPTION DURING THE FISCAL YEARS ENDED JUNE 30, 1894, TO 1913.

Fiscal year ended June 30—	Rate of duty.	Quantity.	Value.	Duty collected.	Average value per dozen pair.	Average ad valorem rate of duty.
1894.....	35 per cent.	69,184	<sup>a</sup> \$37,114	\$12,900	\$0.54	35.00
1895.....	do.....	4,848	<sup>a</sup> 2,561	896	.53	35.00
1896.....	30 per cent.	96,012	39,844	11,953	.41	30.00
1897.....	do.....	33,774	18,495	5,549	.55	30.00
1898.....	do.....	13,927	6,179	1,854	.44	30.00
1899.....	do.....	20,736	10,254	4,876	.784	30.00
1900.....	do.....	21,055	13,038	3,911	.619	30.00
1901.....	do.....	8,619	5,110	1,533	.593	30.00
1902.....	do.....	6,967	3,039	912	.436	30.00
1903.....	do.....	23,191	11,485	3,446	.495	30.00
1904.....	do.....	22,939	10,126	3,038	.441	30.00
1905.....	do.....	22,213	7,926	2,378	.357	30.00
1906.....	do.....	14,159	7,134	2,140	.504	30.00
1907.....	do.....	31,436	15,620	4,686	.497	30.00
1908.....	do.....	27,141	16,001	4,800	.59	30.00
1909.....	do.....	25,789	18,091	5,427	.711	30.00
1910.....	do.....	23,933	16,947	5,084	.708	30.00
1911.....	do.....	134,891	78,383	23,515	.581	30.00
1912.....	do.....	229,046	128,507	38,552	.561	30.00
1913.....	do.....	318,744	174,788	52,436	.548	30.00
	do.....	350,658	178,265	53,479	.508	30.00

<sup>a</sup> Valued not more than \$1.50 per dozen (act of 1890).

Table 81 summarizes the importations of cotton hosiery of all classified values during the fiscal year 1913.

TABLE 81.—QUANTITY, VALUE, DUTY COLLECTED, AVERAGE PRICE, RATE OF DUTY, AND EQUIVALENT AD VALOREM RATE OF DUTY FOR COTTON HOSIERY IMPORTED FOR CONSUMPTION DURING THE FISCAL YEAR ENDED JUNE 30, 1913.

Valued, per dozen pairs, at—	Rate of duty.	Quantity.	Value.	Duty collected.	Average value per dozen pairs.	Average ad valorem rate of duty.
Not more than \$1....	70 cents per dozen+15 per cent.	640,793	\$572,397	\$334,415	\$0.893	Per cent. 93.36
\$1.01 to \$1.50.....	85 cents per dozen+15 per cent.	422,364	586,652	447,007	1.39	76.20
\$1.51 to \$2.....	90 cents per dozen+15 per cent.	579,427	1,099,517	686,412	1.90	62.43
\$2.01 to \$3.....	\$1.20 per dozen+15 per cent.	25,682	67,090	40,882	2.62	60.94
\$3.01 to \$5.....	\$2 per dozen+15 per cent.	6,712	26,326	17,374	3.92	65.99
More than \$5.....	55 per cent.	3,345	23,667	13,017	7.07	55.00
Not otherwise provided for (cut-out hose).	30 per cent.	350,653	178,265	53,479	.508	30.00
Total.....		2,028,981	2,553,914	1,792,586	1.259	70.19

The foregoing table for the last full year that the Payne-Aldrich Act was in force shows that under that act the equivalent ad valorem rate of duty was higher on cotton hosiery of lower price than on the higher-priced grades. The average rate collected on the grades valued at \$1 per dozen or less was 93.36 per cent; the average rate for all grades was 70.19.



Table 82 shows the imports of cotton hosiery of various grades entered for consumption during each quarter of the last year of the tariff act of 1909—that is, from October 1, 1912, to October 3, 1913, inclusive—together with the duty collected and the ad valorem equivalent of the specific and ad valorem rates of duty.

TABLE 82.—QUANTITY AND VALUE OF COTTON HOSIERY IMPORTED FOR CONSUMPTION, AND DUTY PAID THEREON, UNDER THE TARIFF ACT OF 1909, BY QUARTERS, FROM OCT. 1, 1912, TO OCT. 3, 1913, INCLUSIVE.

Grades.	Imports for consumption.				Rates of duty.	
	Quantity.	Value.		Duty collected.	Schedule rate.	Average ad valorem equivalent.
		Amount.	Per cent of total.			
Oct. 1, 1912, to Dec. 31, 1912: Fashioned and seamless hosiery valued, per dozen pairs, at—	<i>Dozen pairs.</i>					<i>Per cent.</i>
Not more than \$1.....	125,013	\$114,584	23.87	\$104,697	70¢ doz.+15%.....	91.37
More than \$1 and not more than \$1.50.....	88,548	123,548	25.74	93,798	85¢ doz.+15%.....	75.92
More than \$1.50 and not more than \$2.....	108,637	207,079	43.13	128,835	90¢ doz.+15%.....	62.22
More than \$2 and not more than \$3.....	4,466	11,620	2.42	7,103	\$1.20 doz.+15%.....	61.13
More than \$3 and not more than \$5.....	1,079	4,291	.89	2,802	\$2 doz.+15%.....	65.30
More than \$5.....	655	4,674	.97	2,570	55%.....	55
Not specially provided for (cut-out hose).....	27,950	14,286	2.98	4,289	30%.....	30
Total.....	356,348	480,092	100.00	344,094		71.67
Jan. 1, 1913, to Mar. 31, 1913: Fashioned and seamless hosiery valued, per dozen pairs, at—						
Not more than \$1.....	232,071	200,548	24.43	192,532	70¢ doz.+15%.....	96.00
More than \$1 and not more than \$1.50.....	114,186	159,257	19.40	120,946	85¢ doz.+15%.....	75.94
More than \$1.50 and not more than \$2.....	182,723	343,650	41.86	215,999	90¢ doz.+15%.....	62.85
More than \$2 and not more than \$3.....	7,501	19,762	2.41	11,966	\$1.20 doz.+15%.....	60.55
More than \$3 and not more than \$5.....	2,034	8,042	.98	5,274	\$2 doz.+15%.....	65.58
More than \$5.....	1,213	8,361	1.02	4,598	55%.....	55
Not specially provided for (cut-out hose).....	157,973	81,326	9.90	24,398	30%.....	30
Total.....	697,701	820,946	100.00	575,713		70.13
Apr. 1, 1913, to June 30, 1913: Fashioned and seamless hosiery valued, per dozen pairs, at—						
Not more than \$1.....	121,804	110,023	19.07	101,766	70¢ doz.+15%.....	92.50
More than \$1 and not more than \$1.50.....	80,555	112,126	19.44	85,291	85¢ doz.+15%.....	76.07
More than \$1.50 and not more than \$2.....	132,705	254,855	44.19	157,663	90¢ doz.+15%.....	61.86
More than \$2 and not more than \$3.....	5,470	14,317	2.48	8,712	\$1.20 doz.+15%.....	60.85
More than \$3 and not more than \$5.....	1,740	6,851	1.19	4,507	\$2 doz.+15%.....	65.79
More than \$5.....	602	4,196	.73	2,308	55%.....	55
Not specially provided for (cut-out hose).....	149,036	74,389	12.90	22,317	30%.....	30
Total.....	491,912	576,757	100.00	382,564		66.33

TABLE 82.—QUANTITY AND VALUE OF COTTON HOSIERY IMPORTED FOR CONSUMPTION, AND DUTY PAID THEREON, UNDER THE TARIFF ACT OF 1909, BY QUARTERS, FROM OCT. 1, 1912, TO OCT. 3, 1913, INCLUSIVE—Continued.

Grades.	Imports for consumption.				Rates of duty.	
	Quantity.	Value.		Duty collected.	Schedule rate.	Average ad valorem equivalent.
		Amount.	Per cent of total.			
July 1, 1913, to Oct. 3, 1913: Fashioned and seamless hosiery valued, per dozen pairs, at—	<i>Dozen pairs.</i>					<i>Per cent.</i>
Not more than \$1.....	60,310	\$55,320	14.24	\$50,515	70¢ doz.+15%.....	91.31
More than \$1 and not more than \$1.50.....	58,909	80,117	20.63	62,090	85¢ doz.+15%.....	77.50
More than \$1.50 and not more than \$2.....	116,043	225,853	58.15	138,316	90¢ doz.+15%.....	61.24
More than \$2 and not more than \$3.....	3,714	9,622	2.48	5,901	\$1.20 doz.+15%.....	61.33
More than \$3 and not more than \$5.....	999	3,986	1.03	2,596	\$2 doz.+15%.....	65.13
More than \$5.....	702	4,984	1.28	2,741	55%.....	55
Not specially provided for (cut-out hose).....	13,213	8,495	2.19	2,548	30%.....	30
Total.....	253,890	388,377	100.00	264,707		68.16
Total, Oct. 1, 1912, to Oct. 3, 1913: Fashioned and seamless hosiery valued, per dozen pairs, at—						
Not more than \$1.....	539,198	480,475	21.20	449,510	70¢ doz.+15%.....	93.56
More than \$1 and not more than \$1.50.....	342,198	475,048	20.96	362,125	85¢ doz.+15%.....	76.23
More than \$1.50 and not more than \$2.....	540,108	1,031,437	45.52	640,813	90¢ doz.+15%.....	62.13
More than \$2 and not more than \$3.....	21,151	55,321	2.44	33,682	\$1.20 doz.+15%.....	60.88
More than \$3 and not more than \$5.....	5,852	23,170	1.02	13,179	\$2 doz.+15%.....	65.51
More than \$5.....	3,172	22,215	.98	12,217	55%.....	55
Not specially provided for (cut-out hose).....	348,172	178,506	7.88	53,552	30%.....	30
Total for 12 months.....	1,799,851	2,266,172	100.00	1,567,078		69.15

As may be ascertained from this table, the imports for consumption of cotton hosiery during the last year of the tariff act of 1909 amounted to \$2,266,172, and the hosiery valued at \$2 or less per dozen pairs amounted to \$1,986,960, or 87.68 per cent. During that year the ad valorem equivalents of the specific and ad valorem rates of duty per dozen pairs of fashioned and seamless hosiery were as follows:

	Per cent.
Valued at not more than \$1.....	93.56
Valued at more than \$1 and not more than \$1.50.....	76.23
Valued at more than \$1.50 and not more than \$2.....	62.13
Valued at more than \$2 and not more than \$3.....	60.88
Valued at more than \$3 and not more than \$5.....	65.51
Valued at more than \$5.....	55

Table 83 shows the imports of cotton hosiery of various grades entered for consumption during each quarter of the first year of the tariff act of 1913—that is, from October 4, 1913, to September 30, 1914, inclusive—together with the duty collected thereon at ad valorem rates; totals for that year; also the same figures for the quarters ending December 31, 1914, to June 30, 1915.

TABLE 83.—QUANTITY AND VALUE OF COTTON HOSIERY IMPORTED FOR CONSUMPTION AND DUTY PAID THEREON, UNDER THE TARIFF ACT OF 1913, BY QUARTERS, FROM OCT. 4, 1913, TO JUNE 30, 1915, INCLUSIVE.

Grades.	Imports for consumption.				Rates of duty.
	Quantity.	Value.		Duty collected.	
		Amount.	Per cent of total.		
Oct. 4, 1913, to Dec. 31, 1913:					
Fashioned or seamless, valued, per dozen pairs, at—	<i>Dozen pairs.</i>				<i>Per cent.</i>
Not more than 70 cents.....	10,308	\$6,868	1.19	\$2,060	30
More than 70 cents and not more than \$1.20.	143,828	145,119	25.20	58,048	40
More than \$1.20.....	127,969	402,339	69.88	201,169	50
Not specially provided for (cut-out hose).....	43,946	21,477	3.73	4,296	20
Total.....	326,051	575,803	100.00	265,573	46.12
Jan. 1, 1914, to Mar. 31, 1914:					
Fashioned or seamless, valued, per dozen pairs, at—					
Not more than 70 cents.....	66,547	42,078	3.54	12,623	30
More than 70 cents and not more than \$1.20.	303,812	309,909	26.10	123,964	40
More than \$1.20.....	416,938	761,725	64.14	380,862	50
Not specially provided for (cut-out hose).....	146,136	73,988	6.22	14,798	20
Total.....	933,433	1,187,700	100.00	532,247	44.81
Apr. 1, 1914, to June 30, 1914:					
Fashioned or seamless, valued, per dozen pairs, at—					
Not more than 70 cents.....	66,753	41,617	5.22	12,485	30
More than 70 cents and not more than \$1.20.	227,858	235,102	29.47	94,041	40
More than \$1.20.....	242,172	446,143	55.92	223,072	50
Not specially provided for (cut-out hose).....	144,215	74,937	9.39	14,987	20
Total.....	680,998	797,799	100.00	344,585	43.19
July 1, 1914, to Sept. 30, 1914:					
Fashioned or seamless, valued, per dozen pairs, at—					
Not more than 70 cents.....	16,863	10,880	2.13	3,264	30
More than 70 cents and not more than \$1.20.	114,059	136,538	26.70	54,615	40
More than \$1.20.....	194,887	353,798	69.18	176,899	50
Not specially provided for (cut-out hose).....	21,222	10,173	1.99	2,034	20
Total.....	347,031	511,389	100.00	236,812	46.31
Total, Oct. 4, 1913, to Sept. 30, 1914:					
Fashioned or seamless, valued, per dozen pairs, at—					
Not more than 70 cents.....	160,471	101,443	3.30	30,432	30
More than 70 cents and not more than \$1.20.	789,557	826,668	26.90	330,668	40
More than \$1.20.....	981,966	1,964,065	63.92	982,002	50
Not specially provided for (cut-out hose).....	355,519	180,575	5.88	36,115	20
Total for 12 months.....	2,287,513	3,072,691	100.00	1,379,217	44.89
Oct. 1, 1914, to Dec. 31, 1914:					
Fashioned or seamless, valued, per dozen pairs, at—					
Not more than 70 cents.....	4,234	2,790	1.00	837	30
More than 70 cents and not more than \$1.20.	66,811	73,063	26.15	29,237	40
More than \$1.20.....	106,473	193,960	69.39	96,980	50
Not specially provided for (cut-out hose).....	18,523	9,662	3.46	1,932	20
Total.....	196,046	279,505	100.00	128,986	46.15
Jan. 1, 1915, to Mar. 31, 1915:					
Fashioned or seamless, valued, per dozen pairs, at—					
Not more than 70 cents.....	81,097	51,644	8.66	15,493	30
More than 70 cents and not more than \$1.20.	198,186	204,289	34.26	81,716	40
More than \$1.20.....	152,087	272,232	45.65	136,116	50
Not specially provided for (cut-out hose).....	132,769	68,151	11.43	13,630	20
Total.....	564,139	596,316	100.00	246,955	41.41
Apr. 1, 1915, to June 30, 1915:					
Fashioned or seamless, valued, per dozen pairs, at—					
Not more than 70 cents.....	38,072	23,898	7.51	7,169	30
More than 70 cents and not more than \$1.20.	85,442	90,187	28.35	36,075	40
More than \$1.20.....	92,458	167,806	52.75	83,903	50
Not specially provided for (cut-out hose).....	71,573	36,245	11.39	7,249	20
Total.....	287,550	318,136	100.00	134,396	42.24

Table 83 shows that the value of importations of cotton hosiery during the first year of the new tariff, October 4, 1913, to September 30, 1914, was \$3,072,691, as compared with the value of the importations of cotton hosiery during the last year of the old tariff, October 1, 1912, to October 3, 1913, \$2,266,172, shown in Table 81, an increase of 35.59 per cent.

Table 83 further shows that the average ad valorem rate paid on the importations during the first year of the new tariff was 44.89 per cent. This may be compared with the duty paid on importations during the last full year of the Payne-Aldrich Act, the year ending October 3, 1913. In that year the equivalent of an ad valorem rate of duty collected on imports of all grades of hosiery was 69.15 per cent, as shown in Table 82.

It will be observed that in both Tables 82 and 83 the imports increased during the quarters ended March 31, 1913, March 31, 1914, and March 31, 1915, over the previous quarters, decreased during the quarters ended June 30, 1913, June 30, 1914, and June 30, 1915, and decreased in the last quarters ended September 30, 1913 and 1914.

The totals for the imports of cotton hosiery of all grades during the year ended October 3, 1913, and the year ended September 30, 1914, and for each quarter during the two years are shown in Table 84.

TABLE 84.—QUANTITY AND VALUE OF COTTON HOSIERY IMPORTED FOR CONSUMPTION AND DUTY PAID THEREON FROM OCT. 1, 1912, TO OCT. 3, 1913, INCLUSIVE, AND FROM OCT. 4, 1913, TO SEPT. 30, 1914, INCLUSIVE.

Quarters.	Imports for consumption.			Equivalent or average ad valorem rate of duty.
	Quantity.	Value.	Duty collected.	
Oct. 1, 1912, to Dec. 31, 1912.....	Dozen pairs.			Per cent.
Oct. 4, 1913, to Dec. 31, 1913.....	356,348	\$480,092	\$344,094	71.67
Jan. 1, 1913, to Mar. 31, 1913.....	326,051	575,803	265,573	46.12
Jan. 1, 1914, to Mar. 31, 1914.....	697,701	820,946	575,713	70.13
Apr. 1, 1913, to June 30, 1913.....	933,433	1,187,700	532,247	44.81
Apr. 1, 1914, to June 30, 1914.....	491,912	576,757	382,564	66.33
July 1, 1913, to Oct. 3, 1913.....	680,998	797,799	344,585	43.19
July 1, 1914, to Sept. 30, 1914.....	253,890	388,377	264,707	68.16
Total, Oct. 1, 1912, to Oct. 3, 1913.....	347,031	511,389	236,812	46.31
Total, Oct. 4, 1913, to Sept. 30, 1914.....	1,799,851	2,266,172	1,567,078	69.15
	2,287,513	3,072,691	1,379,217	44.89

The importations continued to show a decline during the quarter from October 1 to December 31, 1914. The importations of cotton hosiery for consumption during that quarter were: Dozen pairs, 196,046; value, \$279,505; duty collected, \$128,986. It will be observed that the importations steadily decreased by quarters during the calendar year 1914 and that during the last quarter of that year they were less than one-fourth of what they were during the first quarter of that year.

These statistics of imports show that if the sales of American hosiery manufacturers were less in 1914 than in previous years, it was not on account of a flood of foreign importations, the importations being an extremely small per cent of the American product. Moreover, the statistics of imports by countries show that nearly all the imports of hosiery are from Germany. The imports from that coun-

try have practically ceased since the war began. An article in the *Dry Goods Economist* of January 16, 1915, discussing the decrease of hosiery importations during the latter part of 1914, says:

Nor are they likely to increase while the war continues. In any event, with cotton costing 20 cents a pound in Germany competition with domestic production would be out of the question. Aside from this, and regardless of war, importations of hosiery, normally, equal but a small percentage of the output of the United States. Furthermore, the remarkable improvements constantly being made in domestic goods render the menace of foreign competition a steadily decreasing one.

As far as statistics are available, the data regarding the importation of woolen and silk hosiery and other knitted articles of wearing apparel imported for consumption during the fiscal years 1911 to 1914, inclusive, are shown in Table 85.

TABLE 85.—VALUE OF WOOLEN AND SILK KNIT WEARING APPAREL IMPORTED FOR CONSUMPTION DURING THE FISCAL YEARS ENDED JUNE 30, 1911-1914.

Knitted articles.	1911	1912	1913	1914
Woolen (except shawls).....	\$367,708	\$391,928	\$487,285	<sup>a</sup> \$415,775
Silk.....	291,811	201,741	250,794	<sup>b</sup> 181,135

<sup>a</sup> July 1 to Dec. 31, 1913, \$301,340; Jan. 1, 1914, to June 30, 1914, \$114,435. During the fiscal years 1911, 1912, 1913, and the first half of the fiscal year 1914, the importations of woolen articles shown in this table were the value of the importations of knitted articles of wearing apparel, except shawls, composed in whole or in part of wool, on which articles there was a duty of 44 cents a pound plus 60 per cent ad valorem. During the last half of the fiscal year 1914 the imports of woolen articles shown in this table were the value of the importations of knitted articles of wearing apparel, except hosiery, gloves, and shawls, of which wool was the component material of chief value, on which articles there was a duty of 35 per cent ad valorem.

<sup>b</sup> July 1 to Oct. 3, 1913, \$50,588; Oct. 4, 1913, to June 30, 1914, \$130,547. During the fiscal years 1911, 1912, 1913, and 1914 the importations of silk articles shown in this table were the value of the importations of knitted articles of wearing apparel, of which silk was the component material of chief value. The new duty on this class of goods went into effect on Oct. 4, 1913, when it was reduced from 60 per cent to 50 per cent ad valorem.

As shown by the preceding table, the importations of woolen knit articles of wearing apparel, except shawls, increased from the fiscal year 1911 to 1913. The importations of such articles during the fiscal year 1914 appear to be less than in the fiscal year 1913, but the amount for 1914 does not include importations of hosiery or gloves for the last six months of the latter fiscal year.

TABLE 86.—VALUE OF HOSIERY, OF WHICH WOOL WAS THE COMPONENT MATERIAL OF CHIEF VALUE, IMPORTED FOR CONSUMPTION DURING THE SIX QUARTERS ENDED JUNE 30, 1915.

Quarter ended—	Selvaged, fashioned or seamless, valued, per dozen pairs, at—		Not specially provided for (cut-out hose), 20 per cent.	Total.
	\$1.20 or less, 30 per cent.	More than \$1.20, 40 per cent.		
Mar. 31, 1914:				
Value of imports.....	\$2,542	\$28,543	\$481	\$31,566
Duty collected.....	763	11,417	96	12,276
June 30, 1914:				
Value of imports.....	2,153	29,581	10	31,744
Duty collected.....	646	11,832	2	12,480
Sept. 30, 1914:				
Value of imports.....	2,191	81,272	381	83,844
Duty collected.....	657	32,509	76	33,242
Dec. 31, 1914:				
Value of imports.....	2,272	51,577	153	54,002
Duty collected.....	682	20,681	31	21,344
Mar. 31, 1915:				
Value of imports.....	426	14,018	16	14,460
Duty collected.....	128	5,607	3	5,738
June 30, 1915:				
Value of imports.....	16,571	6,628	.....	16,571
Duty collected.....	.....	.....	.....	6,628

During the fiscal years 1911 to 1913 and during the first half of the fiscal year 1914 the tariff rates on hosiery composed in whole or in part of wool was 44 cents a pound plus 60 per cent ad valorem.

In Table 86 are shown the importations of hosiery of which wool was the component material of chief value during the first five quarters after the new tariff on woolen goods went into effect, beginning January 1, 1914, the duty collected, and the rates of duty on such hosiery.

The five quarters included in the above table do not cover any complete fiscal year but, as shown by the table, the importations of woolen hosiery during the last six months of the fiscal year 1914 (the six months ended June 30, 1914), amounted to \$63,310. This period was after the reduction in duty on woolen goods went into effect, but before the beginning of the war in Europe. Adding the importations for these two quarters, and multiplying the total by 2, to roughly approximate the importations for a year, the result would be \$126,620.

This amount (\$126,620) is only a very small percentage of the total amount of the production in the United States of hosiery made in whole or in part of wool. As shown by the Census of Manufactures, the value of the production in the United States in 1909 of hosiery made of merino or mixed materials amounted to \$4,766,195; and of hosiery made of woolen or worsted amounted to \$4,445,227, a total of \$9,211,422. Of this total, \$126,620 (the approximate amount of importations of knit wearing apparel, other than hosiery, gloves, and shawls, made in whole or in part of wool, on the basis of a full year under the new tariff, but under conditions as they were before the European war began) is 1.38 per cent.

As shown by Table 85, the importations of knitted silk articles of wearing apparel during the fiscal year 1914 amounted to \$181,135. This included all classes of knit goods of which silk was the component material of chief value, and not hosiery only. As shown by the Census of Manufactures, the value of the products in the United States in 1909 of silk hosiery was \$3,600,416.

Notwithstanding the fact that during nearly nine months of the fiscal year 1914 (from Oct. 4, 1913, to June 30, 1914) the rate of duty on knit articles of wearing apparel of which silk was the component material of chief value the tariff rate was 50 per cent ad valorem, instead of 60 per cent, as it was before the importations of such goods, as shown by Table 85, were considerably less in the fiscal year 1914 than they were in any of the three previous fiscal years.

Hosiery that retails at over 50 cents a pair is largely knit of silk, or is what is called "boot silk"; that is, the upper part of the foot, the ankle, and lower part of the leg are knit of silk and the balance of cotton. In the last few years there has been a remarkable increase in the use of silk or boot-silk hosiery in the United States, and this tendency of fashion has been fortunate for domestic manufacturers of full-fashioned hosiery.

Under the Dingley Act and the Payne-Aldrich Act the tariff rate on knit goods of which silk was the component material of chief value was 60 per cent ad valorem.

Under the Underwood-Simmons Act the rate is 50 per cent, but it is still high enough effectually to exclude nearly all silk or boot-



silk hosiery, for the reason that the 50 per cent rate applies to the value of the silk, which is the greater part of the whole cost, as well as to the labor and overhead expense. Moreover, practically all silk hosiery manufactured abroad is made full fashioned, and the labor cost on full-fashioned hosiery is higher than on seamless hosiery, whether in America or Europe.

On hosiery made of artificial silk the duty under the tariff act of 1913 is 60 per cent, and there is little foreign competition on such goods, though the amount of importations is not separately stated.

A large hosiery buyer who recently made an investigation of the present condition in the trade had the following to say on January 29, 1915, regarding hosiery:

I am of the opinion that men's cotton hosiery (for which there is but little demand, and which sells for 25 cents and 35 cents a pair) could have been bought in Europe at a lower price than those which prevailed at home before the war. Outside of this item, the home manufacturers have full control of the American market on both men's and women's hosiery.

The reason for this is that within the past few years a great demand has sprung up in America for "shiny" hosiery and American manufacturers have full control of the bulk of this class of merchandise, which consists of fiber silk hosiery, mercerized hosiery, silk ankle hosiery, and all-silk hosiery. In this group, with one exception, viz, mercerized hosiery, and that only to a small degree, can foreign manufacturers compete with the American manufacturers.

American manufacturers who have not been progressive enough to change the character of their product to meet the large demand which exists for merchandise in the above-mentioned group are the ones who are running behind. The progressive manufacturers who are making merchandise of the character mentioned above quote business as normal and in some cases ahead.

I might add for your information that the demand for fiber silk hosiery, which is an imitation of silk, is sweeping the country for men's at 25 cents, and a large demand is developing for women's and children's at 25 cents, 35 cents, and 50 cents per pair. On this class of merchandise the American manufacturers have absolute control. I learned from good authority that one manufacturer, who is the largest hosiery manufacturer in the world, producing \$7,000,000 worth of merchandise a year, is working on full time and that he exported \$500,000 worth of hosiery to England and Germany during the past year. He is also the biggest producer in this country of the so-called fiber silk hosiery.

In order to get a more comprehensive view of the situation, I called up on the phone one of the most important box manufacturers, whose business, of course, would naturally depend upon the production of hosiery, as he caters to this class of trade. He informed me that his business was better than last year. Referring to the hosiery situation, he summed it up by saying that the progressive manufacturers were having a good business while the unprogressive ones were not.

The Census of Manufactures for 1909 shows that the production of silk hosiery increased from 12,572 dozen pairs in 1899 to 434,414 dozen pairs in 1909, or 3,355.4 per cent; while the value of the hosiery product increased from \$186,413 in 1899 to \$3,600,416 in 1909, or 1,831.4 per cent.<sup>a</sup> These figures show the enormous increase in the demand for silk hosiery. No later statistics are available, but it is known that since 1909 there has been a large continued increase in the production of silk hosiery in the United States.

The census reports do not show the production of artificial silk hosiery. In the last few years this branch of the hosiery industry has assumed large proportions.

Since the demand for lighter and "shiny" hosiery has so tremendously increased in the last few years, manufacturers of cotton hosiery have found it more difficult to put their product on the market

<sup>a</sup> Thirteenth Census, Manufactures, Vol. X, p. 79.

with the same margin of profit. Manufacturers who have been progressive enough to change their product to silk or artificial silk hosiery have done a profitable business.

#### EXPORTS OF HOSIERY AND KNIT GOODS.

American manufacturers of hosiery and other knit goods, relying on the home market for trade, have made but little effort to establish a market for their product in foreign countries. The exports of such goods are still very small as compared with the production in the United States, but nevertheless they have shown a substantial growth in recent years.

The statistics of domestic exports do not classify the exports of hosiery separately from those of other knit goods, and there are no statistics showing the exports of woolen and silk hosiery, but the trend of foreign trade in hosiery and knit goods made of cotton is shown in Table 87.

TABLE 87.—DOMESTIC EXPORTS OF COTTON HOSIERY AND OTHER KNIT GOODS FROM THE UNITED STATES DURING THE FISCAL YEARS ENDED JUNE 30, 1908-1915.

Countries to which exported.	1908	1909	1910	1911	1912	1913	1914	1915
Argentina.....	\$689	\$1,257	\$250	.....	\$2,215	\$30,907	\$67,472	169,572
Australia.....	38,943	35,451	67,691	\$73,504	86,651	121,777	142,037	635,494
Bermuda.....	4,066	4,445	6,916	7,975	4,983	18,343	14,108	16,640
Brazil.....	5,131	4,268	2,114	.....	1,112	10,925	5,734	15,103
Canada.....	111,648	98,108	130,057	186,462	247,696	396,879	440,558	588,907
Chile.....	2,624	2,435	3,635	4,440	7,718	17,583	22,576	6,638
China.....	275,568	47,298	26,927	161,767	88,320	192,396	47,014	11,364
Cuba.....	74,424	95,775	105,378	154,722	193,028	185,444	200,476	403,420
France.....	468	274	3,453	335	8,399	17,785	30,892	1,179,364
Germany.....	3,280	8,026	9,301	3,673	10,916	30,334	20,214	1,109
Italy.....	225	1,635	4,597	3,058	13,372	16,350	16,200	3,886
Mexico.....	32,689	13,609	11,139	32,508	25,330	41,294	59,539	47,940
Newfoundland and Labrador.....	30,892	43,521	32,231	41,285	60,966	37,672	35,048	39,559
Netherlands.....	12,960	24,049	5,985	4,977	9,048	33,644	49,288	104,980
Panama.....	72,133	26,742	101,940	98,410	68,458	98,506	95,330	115,226
Philippine Islands.....	41,324	33,477	32,457	48,434	49,439	97,938	92,847	111,483
Santo Domingo.....	5,165	3,518	13,362	20,174	13,876	18,143	42,283	45,943
British South Africa.....	39,490	25,578	20,970	22,949	76,100	39,336	26,882	70,906
United Kingdom.....	638,504	.....	.....	.....	.....	.....	.....	.....
England.....	(e)	430,773	524,586	682,907	731,453	1,005,772	911,886	9,030,468
Scotland.....	(e)	4,545	760	935	13,788	22,562	17,181	99,579
Ireland.....	(e)	1,994	.....	.....	533	13,164	2,027	9,310
Uruguay.....	508	6,473	9,079	6,668	30,466	25,825	26,896	25,609
Other countries.....	92,020	103,374	62,289	91,036	114,969	140,672	179,824	347,945
Total.....	1,482,751	1,016,325	1,175,147	1,646,219	1,858,836	2,613,806	2,546,822	13,080,445

<sup>a</sup> Not stated separately prior to 1909.

It will be noted that during the five years from 1909 to 1914 the exports have increased from \$1,016,325 to \$2,546,822, or more than 150 per cent. Over 35 per cent of the total exports in 1914 went to England. Canada's purchases are also large, and they have more than quadrupled in the past five years. They might be larger if it were not for the preferential tariff given to Great Britain. Argentina, China, Cuba, Australia, Netherlands, Panama, Philippine Islands, Mexico, Santo Domingo, and South Africa are other markets in which American cotton hosiery and other knit goods were being sold in appreciable quantities. The total exports in the fiscal year 1915 were over five times as great as in the fiscal year 1914, but this



great increase was due to the abnormal conditions produced by the European war. The trade in these lines with Central and South America is almost insignificant, but it has shown a rapid expansion in recent years and appears to offer splendid prospects for the future.

Considerable success has been attained in the foreign field by American manufacturers of seamless cotton and low-priced silk hosiery. Even in Germany, which country is preeminent in the production of hosiery, American consuls reported before the war began that the trade in seamless silk hosiery from the United States was assuming such proportions as to cause considerable alarm among manufacturers in that country.

On account of the greater proportion of labor cost in the manufacture of full-fashioned hosiery little business is done in exporting goods of that kind.

In Australia and South Africa there is a demand for fleece-lined underwear from America.

Most of the exportations of hosiery and knit underwear are made through foreign selling agents or exporting houses.

In Table 88 imports and exports of cotton hosiery and other knit goods for the fiscal years 1909 to 1914, inclusive, are shown in parallel columns, together with a column showing the per cent the exports were of the imports in each year.

TABLE 88.—VALUE OF COTTON HOSIERY AND OTHER KNIT GOODS IMPORTED FOR CONSUMPTION, AND DOMESTIC EXPORTS, DURING THE FISCAL YEARS ENDED JUNE 30, 1909-1915.

Fiscal year ended June 30—	Imports.			Domestic exports— Hosiery and other knit goods.	Per cent exports were of imports.
	Hosiery.	Knit goods other than hosiery and gloves.	Total (except gloves).		
1909.....	\$6,390,923	\$459,610	\$6,850,533	\$1,016,325	14.84
1910.....	5,825,099	360,222	6,185,321	1,175,147	18.40
1911.....	3,824,970	433,942	4,258,912	1,646,219	38.65
1912.....	2,912,400	361,857	3,274,257	1,858,836	56.77
1913.....	2,553,914	304,703	2,858,617	2,613,806	91.44
1914.....	2,949,678	341,973	3,291,651	2,546,822	77.37
1915.....	1,705,346	278,182	1,983,528	13,080,445	659.45

The above table shows that during the five fiscal years from 1909 to 1914 the imports of cotton hosiery and other knit goods decreased by more than half, while during the same period the exports more than doubled. In the fiscal year 1909 the amount of exports was 14.84 per cent of the amount of imports; in 1914 it was 77.37 per cent. The domestic exports in 1915, largely no doubt as a result of the war, amounted to six and one-half times the value of the imports.

#### IMPORTS AND EXPORTS OF HOSIERY MACHINERY.

Machinery for knitting seamless hosiery, being peculiarly of American invention, received its complete development in this country, and all such machinery in use in this country is of domestic manufacture.

Though there are two very good American loopers, the great predominance of the looping machinery for seamless as well as full-

fashioned hosiery is of foreign make, usually German. The German two-thread looper was in the field five years before the first American machine of the same kind. The American manufacturer originally purchased the German looper, and to-day has enough loopers, or, if he needs a new one, does not care to install a few American machines alongside the numerous foreign ones. The makers of the foreign looper claim better material and workmanship, a better seam in strength and appearance, and a more reliable trimming attachment, with easier repairing. Though most American manufacturers prefer the foreign looper, the preference arises from not having properly tried out the American machine. American manufacturers who have used the domestic machine are well satisfied with it, though they do admit that there is some slight machine trouble occasionally. To emphasize this satisfaction with the American looper one American full-fashioned hosiery manufacturer uses nothing but domestic loopers.

#### SUPERIORITY OF AMERICAN MACHINERY.

Full-fashioned hosiery, while manufactured to but a small extent in this country as compared with seamless hosiery, is growing very rapidly, especially in silk. Full-fashioned hosiery is knit usually on the German Cotton type machine. The American manufacturer prefers the German machine for the same reason that he prefers the German looper; that is, because it was long in the field before the American machine appeared. The American machine is not used for lack of a proper trial.

Originally the manufacturer purchased the foreign machine, as it was the only one. His help, which had to be skilled, was foreign. Foreign workers naturally preferred the machine they had been taught on, and could see no merit to the domestic machine. The labor required being skilled and it being difficult to learn the trade, the help remains largely foreign, with its prejudice in favor of the foreign machine. American manufacturers who have given the domestic machine a trial and have found it satisfactory do not care to install a few American machines alongside their numerous foreign machines, thus breaking up the smooth working system of the factory. Another reason for the preference of American manufacturers for the foreign machine is that the foreign machine is generally purchased of a jobber who allows long selling terms, in one case the time for payment being five years. The domestic machines must generally be paid for in about one year. The American machines, however, are sold at a less price than the foreign machines, as is shown by Table 64, page 182.

As a matter of fact, when tried out the American machine is found to be far superior, though one is unable as yet to say how it will stand up under wear. This is the opinion of a well-versed manufacturer who has used the foreign machine for 18 years and who recently has installed a few American machines. He has run the domestic machine alongside the foreign one, enabling him to watch closely the comparative merits of both machines. The foreign-machine manufacturer claims 25 per cent greater production, finer points, such as an addition to insure perfect loops, producing a better fabric; a check bar provided with springs to steady the motion of certain parts of the machine; and also better devices for narrowing and for producing a better selvage.

The American manufacturer who has tried out both machines claims that the great superiority of the domestic over the foreign machine is in that it is simpler to handle. It is easier to teach one to knit on it, which is a great advantage, since the supply of skilled help for the foreign machines is very limited. To illustrate how easy it is to teach one to knit on the American machine, the before-mentioned manufacturer brought in a boy who had two weeks previously been working as an office boy and who in that short period had been taught to knit on a domestic machine. This boy after two weeks was getting out the full production of first-quality hosiery.

Another great advantage claimed for the American full-fashioning machine is that it produces hosiery cheaper, because as the cost of knitting is the principal part of the labor cost in full-fashioned hosiery, this machine, requiring, as it does, comparatively little skill, the pay for knitting is much less.

Another very important advantage claimed by this manufacturer for the domestic machine is greater production, though the foreign maker claims the same thing. In actual work this manufacturer found that the most efficient knitter on the best foreign-manufactured machine could produce from 28 to 30 dozen a day, and in the same time the former errand boy was turning out from 33 to 34 dozen of the same grade of goods on the domestic machine.

Other advantages claimed for the American machine are that it will get out its full production after being in use a few weeks, whereas the foreign machine often requires about six months to accomplish the same result, and that a domestic 42-gauge machine will turn out a stocking equal to any 45-gauge stocking made on a foreign machine.

#### EXPORTATION OF AMERICAN MACHINES.

The only hosiery machinery that is exported from the United States is that used in making a seamless product, and a very few loopers. Most of these knitting machines go to England, Germany, and Russia, and a few to Spain, China, and Japan. The few loopers that are exported go principally to China and Japan, and a very few to Argentina and Australia.

Until very recently American knitting-machine manufacturers have made but little effort to develop foreign trade. What they export is sold not to manufacturers of hosiery direct but to jobbers. There are several reasons for this little interest taken in exporting American hosiery machines:

First, our foreign banking connections outside of a few countries in Europe are poor, and the American machine manufacturer is unwilling to extend very liberal credit abroad. He wishes to hold the banker or agent responsible for a bill, not caring to extend credit to the manufacturer who has purchased the machines.

Second, European machinery manufacturers or jobbers have studied foreign conditions and languages, with the result that the foreign hosiery manufacturers have confidence in them.

Third, the American manufacturer can sell the machinery necessary for only a part of hosiery making. The English jobber has a complete line necessary to manufacture an entire stocking. If, for example, a South American would like to purchase machinery necessary to produce a certain kind of hosiery, the English jobber can

supply him with the entire equipment. The American manufacturer has specialized. He makes one or two different machines. He has considered this foreign plan of carrying a complete line of machinery, but has thought unfavorably of it, because in selecting some other manufacturer's machine to go along with his the manufacturers of machines not selected would in their turn act unfavorably toward his machine. Also, the English salesman has for years made a scientific study of the industry and can sell any kind of machine needed, whereas the American salesman, working generally for a manufacturer who makes but one or two different kinds of machines, can only sell his own specialized product.

In recent years exports of hosiery-knitting machinery from the United States have increased to a great extent, due to the bitter rivalry between the two leading foreign machine-manufacturing countries. Hosiery manufacturers in neither of these countries will purchase machines made in the other country if it can get an article nearly as good from someone else. This has greatly stimulated the American export trade in hosiery machinery.

Table 89 shows the number of seamless knitting machines sold annually in the United States and abroad by the three largest manufacturers of seamless knitting machinery in this country.

TABLE 89.—SEAMLESS KNITTING MACHINES SOLD BY THE THREE LARGEST MANUFACTURERS OF SEAMLESS KNITTING MACHINERY IN THE UNITED STATES, 1911-1913.

Years.	Machines sold in United States.	Machines exported to foreign countries.
1911.....	4,515	849
1912.....	5,369	1,235
1913.....	5,979	1,618

#### SUGGESTIONS FOR INCREASING FOREIGN TRADE.

American manufacturers of hosiery have made comparatively little effort to place their products in foreign markets, and with few exceptions such business as they have obtained has largely come through export houses. It is claimed by some of the manufacturers that export houses frequently do not give active attention to the selling of American clothing abroad, because other lines, such as automobiles, hardware, and machinery, offer better returns and do not require the same amount of effort or technical knowledge which is necessary in attempting to introduce American clothing.

There is a rather widespread ignorance among the manufacturers as regards the requirements of the foreign markets and the proper methods to be adopted in building up an export trade. An active campaign of inquiry and study must be inaugurated before definite results can be expected. The most effective plan would be for the manufacturers, individually or collectively, to send their own representatives into the foreign fields to study the conditions and the tastes of the people in the matter of hosiery, show their samples, and establish their own agents in the principal countries who could look after the business when their representatives had returned from the field.

Manufacturers who are unable or unwilling to adopt this policy should avail themselves of the facilities which the Bureau of Foreign and Domestic Commerce at Washington and the American Consular Service provide for assisting them in securing export trade. In the "Trade opportunities" published in the Commerce Reports, issued daily by the Bureau, there are frequently printed inquiries from abroad for the names of American manufacturers and exporters, and if these opportunities are actively followed up connections may be made with importers abroad which may result in good sales. American consuls can furnish specific information in regard to the possibilities for trade in certain markets. They can also procure samples showing the particular kinds of hosiery in demand.

Manufacturers who seriously undertake the work of selling their products abroad should bear in mind the suggestions which always apply in the development of export trade, namely, to write their letters and prepare catalogues in a language which the foreigner understands, to quote prices in a currency with which he is familiar, to furnish c. i. f. (cost, insurance, and freight) quotations as far as possible, to pack goods properly, to fill orders promptly and carefully, to extend a reasonable amount of credit where the standing of the importer justifies it, and to keep in constant touch with the market through representatives or by correspondence. An active campaign which incorporates these suggestions, backed by a thorough study of the foreign markets and their requirements, will undoubtedly result in a substantial increase in exports of hosiery.

At the annual convention of the National Association of Hosiery and Underwear Manufacturers held in Philadelphia, Pa., May 4 to 6, 1915, the board of directors made a report in part as follows:

Paul F. Vogel, president and manager of the Belleville Hosiery Mills, Belleville, Ill., represented the association at the national foreign trade convention in St. Louis in January. So impressed was Mr. Vogel with the possibilities of developing a greater export trade, as shown at the convention, that he suggests that your directors provide for an export department of the association.

At the 1915 convention of the National Association of Hosiery and Underwear Manufacturers an address on "Export possibilities" was delivered by Philip Hough, of John McGiven (Inc.), of New York City. In this address Mr. Hough said:

Before the war American hosiery and underwear sold in a wide range of foreign markets. I have seen American underwear all around the Caribbean Sea. I have seen it in England, Scotland, and France. I know certain classes of underwear sell in Australia in large quantities, and I myself have sold certain styles to South America. American seamless hosiery sells everywhere.

American seamless silk hosiery especially has been described as a "world beater," and now when Chemnitz, the German hosiery manufacturing center, is paralyzed the English mills and those of Italy and Spain can not begin to supply the demands made on them, and so the United States is taking orders for hosiery of all kinds for shipment everywhere. I have seen orders for American hosiery for the Gold Coast of West Africa, where white people do not form more than one-tenth of 1 per cent of the population; and if it sells there, where will it not sell? \* \* \*

The most satisfactory way for a manufacturer of hosiery or underwear to get export trade effectively, it seems to me, is for him to work through a large commission house handling knit goods in New York or through a manufacturer's agent in New York. A hosiery or underwear mill is oftentimes located in a small town, and it is impossible for the manufacturer to get in touch with the New York export houses, the forwarding houses who handle foreign shipments, the banks doing foreign exchange, etc.

Foreign buyers coming into this country transact their business in New York, and mill agents who employ a man especially for this export business are better fitted to handle these buyers and all other export matters, not only on account of their being

located in the export center of the country, but because they generally have a man schooled in export business who is widely traveled, knows several languages, and who can put through with perfect smoothness the business that would seem to the manufacturer to be very complicated.

A monograph on "South America as an export field,"<sup>a</sup> is intended to give manufacturers information as to the character, extent, resources, and trade of South American countries which will enable them to determine in part the most favorable markets for their goods. This monograph, which was published in 1914, contains 216 pages and may be procured from the superintendent of documents, Government Printing Office, Washington, D. C., at 25 cents per copy.

The Bureau of Foreign and Domestic Commerce expects to issue shortly a series of reports setting forth the customs duties on textiles in the various South American countries. The publications will cover everything comprehended in the textile industries from the raw fiber, thread, yarn, and fabric, through all the ramifications of made-up articles—ready-made clothing for men, women, and children; knit goods of all kinds; embroidery, trimmings, and other fancy articles; carpets and rugs; and other manufactured articles of which textile materials constitute the whole or important parts.

The original customs tariffs of all foreign countries are on file in the division of foreign tariffs of the Bureau of Foreign and Domestic Commerce, which, in response to specific inquiries, will furnish information concerning the duties on any particular product in any country in which the inquirer may be immediately interested.

The daily Commerce Reports of the Bureau of Foreign and Domestic Commerce, which were formerly known as the Daily Consular and Trade Reports, contain from time to time reports of trade opportunities and other information of value concerning this industry in foreign countries. Following are extracts from these reports relating to the hosiery industry which have appeared in recent years in these daily reports:

#### ARGENTINA.

##### DOMESTIC PRODUCTION AND IMPORTS OF HOSIERY.

[Consul William Dawson, Jr., Rosario, Commerce Reports, Jan. 11, 1915.]

Favored by the high tariff, Argentina had, according to the industrial census (report published in 1910), 47 factories making knitted goods. Returns do not show hosiery separately. Of these factories, 43 were in the city of Buenos Aires, which is the only important textile center. The total capital of the 47 factories was \$1,390,000, and the total annual sales were valued at \$3,000,000. Raw material was valued at \$1,540,000, of which \$630,000 worth was produced in the country and \$910,000 worth imported from abroad. The factories had 2,390 employees and developed 798 horsepower, of which 542 was steam and 166 electric.

A further idea of the importance of the home industry may be obtained from a note recently addressed to the Government by the "Union Industrial Argentina" at the request of Argentine manufacturers of knitted goods. The note points out the desirability of inviting manufacturers of cotton textiles in the United States to enter into commercial relations with Argentine manufacturers of knitted goods to establish a textile business in this market, and recommends that Argentine consular representatives ascertain whether American cotton mills would dye black and colored threads combined. It is stated that Argentina uses 8,800,000 pounds of these goods annually, in addition to about 7,700,000 pounds of crude cotton thread.

<sup>a</sup> Special Agents Series No. 81.



The following figures, taken from official customs statistics, show imports of various kinds of hosiery into Argentina in recent years, with the principal countries of origin. It is possible that some hosiery is imported by parcel post, in which case it would fall under the general heading "parcels" (economiendas) and would not be included. It is further possible that certain American products are received via Europe, and thus are not credited to the United States:

Articles and years.	France.	Germany.	Spain.	United Kingdom.	Other countries.	Total.
<b>COTTON HOSIERY.</b>						
Average for 5 years, 1907-1911.....	Pounds. 267,026	Pounds. 950,483	Pounds. 41,663	Pounds. 21,458	Pounds. 21,301	Pounds. 1,301,931
1912.....	221,523	1,094,421	34,904	21,854	25,569	1,398,271
1913.....						1,907,915
<b>LINEN HOSIERY.</b>						
Average for 5 years, 1907-1911.....	48,138	27,468	6,027	4,270	780	86,683
1912.....	55,546	59,430	7,998	4,804	1,561	129,339
1913.....						185,332
<b>WOOLEN HOSIERY.</b>						
Average for 5 years, 1907-1911.....	19,156	18,263		16,845	529	54,292
1912.....	15,142	26,475		25,080	1,594	68,297
1913.....						61,621
<b>SILK HOSIERY.</b>						
Average for 5 years, 1907-1911.....	1,063	443		275	a 54	1,835
1912.....	2,000	4,685		1,572	b 1,576	9,833
1913.....						13,481
<b>OTHER HOSIERY.</b>						
Average for 5 years, 1907-1911.....	8,278	3,971	983	2,374	110	15,716
1912.....	8,794	5,165	2,236	3,547	1,592	21,334
1913.....						35,819
<b>TOTAL.</b>						
Average for 5 years, 1907-1911.....	343,661	1,000,628	48,673	44,722	22,774	1,460,458
1912.....	303,005	1,190,176	45,138	56,863	31,892	1,627,074
1913.....						2,204,168

a 1 pound from United States.

b 1,215 pounds from United States.

Figures showing imports by countries for 1913 are not available. The following table shows the imports of various kinds of hosiery into Argentina during the first half of 1913 and 1914:

Kinds of hosiery.	Jan. 1- June 30, 1913.	Jan. 1- June 30, 1914.	Kinds of hosiery.	Jan. 1- June 30, 1913.	Jan. 1- June 30, 1914.
Cotton.....	Pounds. 757,477	Pounds. 847,477	Other.....	Pounds. 11,359	Pounds. 16,559
Linen.....	53,906	42,296	Total.....	884,692	960,282
Woolen.....	54,397	49,267			
Silk.....	7,463	4,683			

The market for silk hosiery has been seriously affected by the present economic depression. On account of the long summers and short, mild winters, the demand for woolen hosiery in this district is small. In general the finer grades of hosiery have been imported from France and the middle and cheap grades from Germany.

The principal demand is for black and brown socks. In fancy socks, plain colors without pattern are preferred. A little openwork or embroidery in the same color as the body of the sock is acceptable. Striking colors and pronounced stripes or patterns find little or no demand. This applies more particularly to the better grades of hosiery, such as are handled by department stores. Openwork stockings for women were extremely popular here a few years ago, and they are still seen to a large extent, especially among lower classes. At the present time very light, so-called "muslin" stockings, almost transparent, are in style. Here, as elsewhere, low-priced hosiery finds the

best market. With respect to imported hosiery, the very high specific duty tends to favor better grades, particularly hosiery of light weight. While most of the hosiery sold here has the seam down the back, seamless hosiery is popular and would receive the preference in many quarters, other things being equal.

Dealers in hosiery at Rosario state that the Argentine industry is practically confined to coarse and middle grades of cotton and woolen hosiery. As duties are based on weight, it is hard for foreign manufacturers to compete in price in heavy grades.

Summer is, of course, the principal season here. The sale of straw hats, low shoes, summer hosiery, etc., begins in September. The wholesaler must receive his summer stock in May or June, the retailer in August. The importing jobber orders merchandise for the following summer in August or September. The retailer who imports direct orders from November to January, according to the promptness of the factory in making deliveries. As a matter of fact, department stores at Rosario place orders throughout the year. Some of the leading stores send buyers to Europe.

The marks used depend largely on the preference of individual importers. As far as general statements can be based on information obtained from the few Rosario importers, the trade-marks of both manufacturer and importer are preferred, the former being a guaranty to the importer and the latter to the customer. Department stores generally use their own trade-mark in connection with that of manufacturer and point out that the manufacturer is less apt to sell inferior merchandise if articles bear his trade-mark.

The better firms at Rosario prefer to pay cash in order to get discounts. Recognized terms on time payments are 90 days from arrival of merchandise. Department stores that do not seek credit much prefer to deal directly with factory. Some local importers have had unfortunate experiences with export agencies that proved unscrupulous in filling orders, sending goods inferior in quality or not like the samples. Furthermore, the export agency, even when reliable, may not be able to continue to supply the same articles. Before assuming the risk and trouble of introducing a new line the importer must be sure that, if marketable, it can be supplied regularly.

#### AUSTRIA-HUNGARY.

##### BOHEMIA EXTENSIVE USER OF SILK HOSIERY.

[Consul Charles L. Hoover, Prague, Commerce Reports, Aug. 6, 1913.]

As a market for articles of luxury, Prague furnishes a field perhaps about equal to that which would be found in the average city of 50,000 or 60,000 inhabitants in the United States, but as it is also the center and logical distributing point of the rich Kingdom of Bohemia, the importance to American exporters of establishing connections here is much greater than it would be if the market were limited to the city itself. The great health resorts, Carlsbad, Marienbad, and Franzensbad, which are visited by thousands of wealthy persons each summer in ordinary years, are only a short distance from Prague and are tributary to it commercially. There is a very large retail trade in silk knit goods in these places, especially hosiery, but the trade suffers from the poor quality of the goods sold. A pair of men's socks costing \$2 rarely survives one day's wear. Women's hosiery is defective in that the longitudinal threads break and pull out.

The use of silk underwear is confined to the very rich in ordinary times, but it has been discovered that the vermin which always appear when large bodies of men are assembled under conditions where cleanliness is impossible will not live in silk underclothing. As it has been ascertained that these vermin carry the germs of the dreaded spotted fever, the sale of silk underclothing has greatly increased recently.

The colors most in demand in men's underwear are "champagne" or light pongee color (known locally as macco, probably from Macao, from which pongee was originally brought), lavender, and rose. Both full length and knee drawers are in demand. "Coat" shirts are not well known, but are well liked by those who have used them. Regular undershirts are similar in form to those used in America.

Few women's silk undervests are used, and there is no demand for union suits. It is said that women's undergarments consist of a muslin or silk chemise. The upper part of the body is kept warm by knitted outer jackets worn under the cloth coat, or by fur coats, while the lower limbs are clothed next to the skin in a garment called "Reform Hosen," which reaches from the waistline to the knees, and is held in place by elastic bands at these points. This combination of underclothing is said to be quite general throughout Europe, so that exporters, in arranging for this market, will not be preparing anything which would not be salable elsewhere.



Men's silk socks are sold almost exclusively in solid colors, usually black with decorative clocks. Women's stockings are sold in all colors to match different costumes. All silk knit goods sold in this market have been imported in the past from Grenoble, France; Chemnitz, Germany; and Zurich, Switzerland.

Terms of payment vary greatly, but as a general rule a discount of 5 per cent is allowed for cash within 30 days, with six to nine months net. Under the present moratorium the custom is to pay cash on delivery of the goods, and merchants report that they are so well pleased with the arrangement that it is probable the old system of long credits will never again become general.

### BRAZIL.

#### OPPORTUNITIES FOR AMERICAN MANUFACTURERS.

[Vice Consul General Joseph J. Slechta, Rio de Janeiro, Daily Consular and Trade Reports, July 24, 1911.]

In spite of the protection afforded domestic industries engaged in the manufacture of knit goods in Brazil, the field offers opportunities for the export of American-made goods which indifference, on the part of American manufacturers has made of little account.

Statistics of foreign trade as at present compiled do not specify separately the different classes of knit goods, with the exception of hosiery. The total imports of hosiery into Brazil amounted in 1909 to about \$124,000—nearly 25 per cent less than in the year preceding. Of this total, Germany sold 75 per cent and France most of the rest. American hosiery, especially for men, is so greatly superior to the domestic product and to that imported from Germany and France that a little well-directed effort on the part of American exporters would be certain to get trade. It is practically impossible to buy hose in Rio de Janeiro that are not seamed in such way as to cause one used to American-made hose to marvel that Americans have not secured complete control of the market in this item.

Considerable quantities of underwear, sweaters, scarfs, and other knitted goods are imported, but exact figures can not be obtained. Probably the most important item is that of underwear, and British and French goods predominate in this line. The finer grades of French goods seem especially in demand by reason of the fine finish. That light grades of well-made and well-finished American underwear could be sold here, there can be no question. In fact, a young American who has for a year past been resident in Rio de Janeiro as a manufacturer's agent has found no difficulty in securing trial orders for such goods.

The American manufacturer who is desirous of obtaining a foothold in the Brazilian markets had best not waste his time and money to that end unless he is prepared to get direct representation. Absolutely nothing can be done by catalogues or by correspondence with local firms. Several producers of noncompeting lines should combine in putting a good man on the field and enabling him to spend sufficient capital to give the matter a fair trial. Such a representative must be one who is willing to leave his own country for a good salary and commission. With such representation American goods can be sold in Brazil on their merits, and that is precisely what they have not had an opportunity to do heretofore.

Exporters in the United States, not merely of these lines but of many other products, have attempted to settle the question of whether there is a market here for their goods along academic lines, in sharp contrast with the methods by which they sell goods in the United States. Manufacturers habitually request that they be furnished with tariff schedules, local prices, shipping regulations and customs, credit terms, etc., and then with such data at hand have attempted to settle the question of foreign trade. While it may be important to have such data, it is much more to the point to learn what kinds of goods are wanted, supply such goods, and take them to the importer and find out whether he will buy them. The importer will very willingly take care of the matter of duty, shipping instructions, credit terms, etc., if the goods and the prices suit him.

### CANADA.

#### PARTICULARLY GOOD MARKET FOR FINE AMERICAN GOODS.

[Consul Henry P. Starret, Owen Sound, Ontario, Feb. 25, 1915, Commerce Reports, Mar. 13, 1915.]

The effect of the disturbed conditions in Europe on the knit-goods trade of Canada has been to produce some radical changes in buying. Certain continental goods are no longer popular, buyers even refusing to consider surplus stocks held by importers, and local dealers frankly state that they now wish immediate quotations on these

goods from American manufacturers. The foresight of at least one large American hosiery company has resulted in the establishment of a branch factory in Ontario to supply this additional Canadian trade.

When it is stated that Canada's annual purchases of hosiery and knitted goods approximate \$20,000,000 the importance of this market as a field for American wares is evident. Canadian factories supply some 65 per cent of this trade, the remaining 35 per cent coming in the past chiefly from Great Britain, the United States, and Germany.

The temporary elimination of continental goods as a factor in this trade, together with a considerable restriction in the British export on account of furnishing military supplies, creates a large deficit in Canada's importation of these lines. While domestic manufacturers will profit to some extent by present conditions, their plants are not sufficiently equipped, nor are certain raw materials readily available, to enable them to produce many of the medium and high grades demanded by the trade. In view of these facts, Canadian dealers look to the United States to make up the deficiency, and to that end American exporters should give careful consideration to their Canadian selling agencies.

There is a particularly good market for the finer grades of American cotton and lisle hosiery for men and women, as well as for cotton mesh and dimity underwear. Merchants repeatedly refer to these goods as being most in demand at this time.

Knit goods are imported by jobbers or bought on order through manufacturers' agents located at Montreal and Toronto, the jobbers' profit being approximately 10 per cent and the agents' commission varying from 4 to 7½ per cent, according to the character of the line handled. All such goods are sold to dealers on terms of 3 per cent 30 days, net 60 days, open credit, quotations being f. o. b. jobber's or Canadian manufacturer's shipping point. Foreign manufacturers' terms to importers, both jobbers and dealers, are practically the same, although the practice of advance dating of invoices for early season purchases really gives importers one to two months' additional credit. Some of the larger dealers save commissions and jobbers' profits by maintaining purchasing agents in England, Scotland, and France, in which case payments are made direct to the foreign manufacturer or his agent.

The grades of underwear most in demand are men's balbriggan, to sell at 50 cents a garment; men's winter all-wool and mixed, to sell at \$1; women's cotton open mesh and plain knit, to sell at 25 cents; women's winter all-wool and mixed, to sell at \$1 per garment. Popular men's sizes are 36 to 40 for shirts and 34 to 38 drawers; women's, 36 to 38. The bulk of the trade in hosiery is in cotton-and-wool mixed socks for men, to retail at 25 cents; cashmere, 35 cents; women's cotton stockings, 2 pairs for 25 cents; and lisle stockings, 35 cents; the sizes most in demand are 10 to 11 for men and 9 to 9½ for women.

### CHILE.

#### LARGEST IMPORTS OF SILK HOSIERY FROM THE UNITED STATES.

[Commercial Attaché Verne L. Havens, Santiago, Commerce Reports, June 10, 1915.]

American socks are held in esteem. The records of imports show \$1,996 worth from that country in 1914, \$1,567 worth from Germany, \$989 worth from France, and \$832 worth from Japan. In discussing the possibility of sales of this article with a well-known dealer in men's supplies, the writer was informed that there are a number of firms in Santiago and Valparaiso who might be—and several who certainly would be—interested in seeing samples of American socks. It would be necessary that some one should represent the American firm and have samples, but it would not be necessary that samples be sent to the various prospective retail dealers. At present it is not likely that any firm would be willing to tie up its money for a long time in paying cash against documents for silk socks. If a responsible person could be found who could carry a small supply American sales would probably increase, especially when it is difficult for competitors to enter the field.

In 1913 the United States was the largest seller of silk stockings to Chile (\$5,431 worth) and was followed by the United Kingdom (\$3,941), France (\$1,520), and Germany (\$1,509). In 1914, however, American sales dropped to \$408, and those of the United Kingdom to \$825, while French and Belgian sales increased to \$2,717 and \$1,808, respectively. It is thought that Chilean purchases of silk stockings from the United States could be increased.

## CHINA.

## AMERICAN SILK HOSIERY GAINING GROUND.

[Vice Consul General A. E. Carleton, Hongkong, Daily Consular and Trade Reports, Apr. 19, 1913.]

In the opinion of Hongkong merchants, silk hosiery made in the United States is gaining ground in the Far East, although the importations are as yet unimportant. One of the largest retailers in that colony says that its reasonable price and the improvements which make it almost immune to the effects of that climate will increase its popularity, but that the American product in a measure lacks the luxurious "feel" and appearance of the European product. The silk hosiery made in Japan withstands the dampness, but its appearance and cut are not popular with European buyers. A German make of cotton and fine wool, interwoven with silk, selling at \$1.25 gold, finds a ready sale.

Germany and Japan are the principal sources of supply for the foreign hosiery imported at Canton, and only a cheap grade is sold. The Chinese women, like the Chinese men, wear socks, which are invariably of cotton, and the sale of silk stockings is confined to the foreign ladies of the district, who number probably not more than 200. The local demand is largely supplied from Hongkong. Ladies' silk hose sell for about \$1 and men's socks for \$0.75.

The sale of silk hosiery in Shanghai and Tientsin is also confined to the small foreign population, with the exception of a few Chinese ladies who adopt European dress on certain occasions. Prices in those cities range from \$1.25 to \$2.50 per pair. In Tientsin the demand is largely supplied by Japanese silk hose selling for \$1.12½ to \$1.50 gold.

## HIGH-GRADE AMERICAN HOSIERY IN DEMAND.

[Consul General George E. Anderson, Hongkong, Nov. 8, 1914, Commerce Reports, Jan. 19, 1915.]

While the imports of hosiery into China during the past few years have formed one of the principal items of clothing purchased abroad and have increased immensely, the increasing proportion of the trade held by Hongkong and by native knitting establishments is the great feature of the trade and is likely to show immensely greater prominence in the immediate future. The net imports of hosiery into all China in 1913 amounted to 2,109,301 dozens, valued at \$1,397,003, as compared with 1,345,959 dozens, valued at \$910,852 in 1912, 736,467 dozens, valued at \$551,524 in 1911, and 798,477 dozens, valued at \$631,261 in 1910, and smaller imports previously. The average valuation in 1913, therefore, was 66.2 cents gold per dozen; in 1912 the average price was 67.6 cents, in 1911 it was 74.9 cents, and in 1910 it was 80 cents, gold. This course of prices illustrates perfectly the course of the trade. Up to 1911 the vastly greater portion of the trade represented imports of hosiery into Chinese ports for the use of foreigners and comparatively few higher class Chinese users of foreign or semi-foreign clothing, or at least of various foreign-style garments.

About the time of the revolution the use of hosiery of the cheapest sort came to be more and more common among the less well-to-do classes of the Chinese population. About the same time there developed a considerable industry in the way of small knitting factories for hosiery and knit underwear in south China and Hongkong's trade territory. Japan commenced to develop an increased trade in such goods. Up to that time Great Britain had a large portion of the trade in the higher class goods through Hongkong, but the chief portion of the trade direct was from Germany and Japan. In 1910 Germany had about 30 per cent, Japan about 18.5 per cent, Hongkong about 42 per cent, and the rest scattering, the Hongkong trade representing German goods for the cheaper grades and English goods for the higher grades. There were few shipments of importance of native-made goods. In 1911 Germany had about 25 per cent, Hongkong about 36 per cent, and Japan about 28 per cent of the trade, with the rest scattering. In 1912 Germany had about 29 per cent, Japan about 30 per cent, and Hongkong about 35 per cent.

On the whole trade, therefore, Japan has steadily gained at the expense of its two chief competitors. As a matter of fact the trade has increased in very much larger proportion than that indicated in their respective shares for 1912, for not only were the imports in 1913 much larger, but the amount of these goods manufactured in China itself was very much greater. While in the earlier years the proportion of the trade in cheap goods handled through Hongkong was almost entirely German, it has been largely of Hongkong or south China make in the past two years.

What the result of the war in Europe is to be on this trade is somewhat problematical. On the face of things the large share of the trade held by Germany ought to be available for outside competition, and this is unquestionably the case with higher grade goods

from the United States. For the great mass of cheap goods manufactured for use of the ordinary Chinese buyer, however, it is doubtful if United States mills can compete or will care to compete successfully with the local Hongkong and south China factories for the south China trade, and with the Japanese factories for the trade in the Yangtze Valley.

The labor element in manufacture seems to be the chief factor in favor of the native-made goods, for most of the native factories use American knitting yarn. The goods manufactured by the local factories are coarse and lack finish and other desirable qualities, but they are serviceable and cheap, and, being the first goods ever used by many of the Chinese, they are free from invidious comparisons. The larger portion of the output is from small home factories where the cost of labor is at a minimum. Japanese goods competing with these native products have the advantage of low freight rates, convenience to the markets for studying demand as to colors and styles, and superior machinery of distribution among the native dealers.

The United States has commenced to sell some considerable amounts of hosiery in the larger Chinese ports in the past two years, but the goods are almost exclusively high grade, including silk and cotton and silk hose. The American goods are in good demand with high-class buyers. Cheaper grades of American goods would sell in the market on their merits. German goods usually have been serviceable, inclined to be large for their respective sizes, lose their shape easily, and "pull" easily; that is, give unduly in one part of the garment and tighten in others. The native-made goods have similar faults, but come very cheap. Ordinary grades of recognized local brands or chops sell around \$2 local currency or 86 cents gold per dozen. They come usually in whites, blacks (of poor dye), light blues, and browns; the whites, blues, and blacks being much more popular. They are usually sold by the factories here direct to the Chinese middlemen, while the foreign goods, such as the German, are usually sold through the import commission houses. Japanese goods also are sold through Japanese firms directly to the Chinese middlemen.

## PROMISING OUTLOOK FOR AMERICAN MANUFACTURERS.

[Vice Consul General C. P. McKiernan, Shanghai, Dec. 14, 1914, Commerce Reports, Feb. 18, 1915.]

Large quantities of socks are imported into China; the cheaper qualities having come from Germany, and the better qualities, especially "macco socks," chiefly from England. Within the last few years Japan has entered the field and is competing most successfully. Natives also have engaged in the manufacture of socks, and foreign machinery for this purpose has found a good market in China. It is believed that there is a promising outlook at present for American manufacturers to compete along these lines, though, as the native industry develops and the Japanese trade increases, there will be a gradually diminishing demand for other goods.

The net imports of hosiery into China from foreign countries increased from 707,051 dozens in 1909 to 1,345,959 dozens in 1912, and to 2,109,301 dozens in 1913. The following were the imports from the chief sources of supply for the period 1909-1912 (the latest year for which statistics by countries are available):

Whence imported.	1909	1910	1911	1912
	Dozen.	Dozen.	Dozen.	Dozen.
Hongkong.....	269,952	361,912	255,452	371,665
Great Britain.....	14,065	9,799	17,596	31,381
Germany.....	203,237	177,539	126,927	173,007
Austria-Hungary.....	33,693	42,042	28,590	71,081
Japan.....	140,920	184,939	300,323	691,003

Leaving out of consideration the amounts imported from Hongkong, which represent mostly imports from Europe transhipped at that port, it will be seen that Germany's imports during the four years decreased about 15 per cent; that those from Great Britain and Austria-Hungary more than doubled; and that those from Japan increased almost fivefold. The imports from the United States were only 1,883 dozen in 1912, but there were none in 1909.

Chinese-made socks are of coarse, inelastic cotton cloth and are kept adjusted to the leg by a strap, usually of cotton. Socks of foreign manufacture, which are preferred by an increasing number of Chinese, are made of cotton, the shape of the sock conforming to the contour of the foot. The biggest business in these socks is done in the qualities selling at 3 shillings (73 cents) up per dozen c. i. f. Shanghai, and white is the

most popular color. Fancy socks, the designs being small stars or flowers, are also very much in favor. These range in price up to \$1.46 per dozen. Winter socks are imported mostly from England. Prices vary from \$1.46 per dozen up.

A large business is carried on in women's socks, the importance of which is realized by few foreign manufacturers. Socks in plain colors costing about 73 cents per dozen are the best sellers of this class, though there is also a large market for women's fancy socks. Chinese taste is constantly changing, but at present women's fancy socks are mostly spotted; practically none are striped. New samples are constantly required. The smallness and shape of the Chinese woman's foot are of great importance.

The following are the usual assortments in the case of 100 dozens: Women's socks—size 6½, 15 dozens; size 7, 30 dozens; size 7½, 25 dozens; size 8, 20 dozens; size 8½, 10 dozens. Men's socks—size 8, 5 dozens; size 8½, 25 dozens; size 9, 40 dozens; size 9½, 25 dozens; size 10, 5 dozens.

Socks selling at \$1.22 up are usually packed 50 dozens to the case; poorer qualities, 100 dozens to the case. Moreover, they are packed 1 dozen to a carton if of poorer quality, and one-half dozen to a carton if of better quality. Glazed green paper should be used; otherwise it will be thought that the socks are of Japanese make. Every dozen or half-dozen, as the case may be, should be scuttled with two silk ribbons, and should be wrapped with a strip of white glazed paper bearing the trade-mark and Chinese name of the importing firm. These extra expenses must be borne by the manufacturer and should be taken into consideration in fixing prices.

There is a limited business in women's black stockings selling at \$1.22 to \$1.95 per dozen. These are packed 50 dozens to the case.

The trade in socks and stockings of the best grades, which are sold to foreigners, is confined almost entirely to British importing firms having agents in London.

#### HOSIERY TRADE IN SOUTH CHINA.

[Consul General George E. Anderson, Hongkong, Commerce Reports, May 28, 1915.]

Present indications are that Chinese-made hosiery will supplant almost entirely the supply of such goods which formerly came from Germany and Austria to supply the cheap Chinese trade.

In recent months the Japanese goods have come to be less in favor, for while they made a good appearance and in general are designed to supplant German goods the Chinese user has found them of inferior quality. On the other hand, the hosiery trade in the small hand factories in South China and in the larger establishments started by Chinese capitalists both in Hongkong and vicinity and in Shanghai has been found by Chinese users to be greatly superior to the Japanese in wearing qualities. At the same time these factories have succeeded in turning out goods of very fair appearance. With their usual discrimination in such things, Chinese consumers are turning to the product of their own concerns as representing better value.

The present situation in this trade, therefore, represents a division of the trade, on the one hand, between cheap Chinese-made goods with a decreasing import of such cheap goods from Japan and practically no competition in such cheap goods from Europe, and, on the other hand, the import of American and English hosiery for the finer trade. The course of this latter trade of late has been rather in favor of American goods. Whether this shall continue is largely, if not entirely, a matter of quality and price.

The manufacture of Chinese-made hosiery all over China involves the increasing use of Japanese hosiery yarns, largely two-ply No. 32 yarn, especially in the Yangtze Valley and to some extent in Hongkong and south China. Most of the factories and the trade in south China generally continue the use of American yarn, and the south China goods, other things being equal, are said to be preferred by the Chinese consumer, both in the south and in other portions of China. The Chinese-made goods have the advantage of the 5 per cent ad valorem import duty on goods imported from Japan, but apparently the superior wearing quality of the Chinese goods generally, and especially those from south China, is the determining factor in the trade at present.

A large share of the hosiery now being made in Hongkong is going to Manila, where the demand for such goods for the use of the Filipinos is increasing very rapidly. The hose now being shipped is of the cheapest quality, though it represents real merit as to wear. The demand in the islands is for hosiery of the brightest colors. A Hongkong factory has recently filled an order for a lot of such goods put up in boxes of a half-dozen pairs to the box, it being specified that each box shall contain a pair, respectively, of green, red, yellow, pink, purple, and blue hose.

#### COLOMBIA.

##### IMPORTS FROM VARIOUS COUNTRIES.

[Consul Ross Hazeltine, Cartagena, Commerce Reports, June 7, 1915.]

In spite of severe competition from local manufacturers and the obstacle of a rather high import duty, the imports of hosiery through the port of Cartagena during the past calendar year amounted to \$14,520. This may be accepted as approximately one-third the total imports into Colombia during the same period. Of this trade Germany enjoyed 67 per cent, although German imports ceased after August 4, 1914. The imports at Cartagena by countries were as follows in 1914: From Germany, \$9,742; United Kingdom, \$1,032; France, \$996; Spain, \$974; United States, \$694; all other countries, \$1,082; total, \$14,520.

Europe has held the hosiery trade in this and other South American countries because it supplies a durable, cheap cotton and lisle article adapted to local tastes and requirements. The kind of hose sold here would not be popular in the United States. As a rule the domestic product is not as shapely nor as durable as the American-made hose. However, the initial cost of the article seems to be the deciding factor. For example, European open-work cotton socks retail at \$0.50 to \$0.70. Such socks are not the equivalent in value, shape, or durability of American socks selling at \$0.35 retail in the United States. The European product is much more fancy than either the domestic product or the American, and this fact must be given due weight. However, the American product deserves a much higher position in foreign trade, and it is believed that if the trade is carefully cultivated American manufacturers will find a good outlet for their products, especially in the light-weight cotton and lisle goods.

The local factory turns out good hose and enjoys a fine local trade. The factory is equipped with 35 American knitting machines and is operated by an American superintendent.

The import duties on hosiery are as follows: Cotton, \$1 per kilo (\$0.454 per pound); linen, \$1.20 per kilo (\$0.544 per pound); wool, \$1.60 per kilo (\$0.726 per pound); silk, \$3.50 per kilo (\$1.588 per pound). These duties are levied on the gross weight, and this fact invites attention to the European custom of packing highly dutiable textiles in bales instead of boxes. Perhaps this practice could advantageously be followed by American exporters of hosiery and other textiles, inasmuch as the saving on a single package may easily amount to \$20 or more. Correspondence should always be in Spanish, but prices may be quoted in American currency. Samples can be sent by parcel post.

#### FRANCE.

##### AMERICAN SILK HOSIERY EXTENSIVELY SOLD.

[Daily Consular and Trade Reports, Apr. 19, 1913.]

In Paris certain well-known brands of American silk hosiery enjoy an extensive sale, being found, among other places, in nearly all the stores where American shoes are sold. Little effort has apparently been made to extend their sale in other parts of France, although the demand for this class of goods is steadily increasing in those regions. The prices of French silk hose are higher than those for which American hose are sold, either in the United States or in France. For instance, American socks can be purchased in Paris for 60 cents a pair, while it is difficult to find French socks for less than 80 cents.

Efforts have been made to introduce English and German hosiery into Rouen, without much success, as the goods were too light. The Norman trade demands strong, thick goods, plain rather than fancy, as durability is the first consideration. Most of the Rouen dealers buy from agents in Paris, Lyons, or other distributing centers, and carry only small stocks, on account of the ease with which telephone orders can be filled. Silk hose for men sell in Rouen for \$1.20 to \$2 per pair, and for women from \$1.50 to \$2.50 per pair. This class of goods is said to make up about one-tenth of the entire sale of hosiery.

#### GERMANY.

##### IMPORTS OF AMERICAN HOSIERY STEADILY INCREASING.

[Consul Thomas H. Norton, Chemnitz, Germany, Daily Consular and Trade Reports, Apr. 19, 1913.]

While it seems like conveying coals to Newcastle to attempt to introduce American knit goods into Germany, yet shipments of American hosiery to the German market in steadily increasing amounts are now a matter of daily occurrence. The trade is



assuming such size that the hosiery manufacturers of Chemnitz are beginning to feel some apprehension as to the possible entry of the world's market, at no remote date, by American manufacturers. The essential facts in connection with this appearance of American hosiery in the country which has hitherto been the chief source of supply for a number of European markets, and for most non-European countries, with the exception of the United States, are worthy of note as illustrating possibilities along other lines of manufacture.

One noteworthy feature in the movement has been the widespread effort to dispose of American hosiery in direct connection with the sale of American shoes. One enterprising American hosiery firm has made a pronounced success in this direction, and its stockings and socks of good quality and at popular prices have regularly been offered for sale along with American footwear in all leading German cities. The prices and quality have created a distinct demand, and German dealers have turned to American sources to secure the requisite supply. As most of the hosiery required in Germany is supplied by Chemnitz manufacturers and jobbers, inquiries have come to this city in an increasing number as to whether American makes could be secured.

Thus far the demand has been exclusively for seamless silk hosiery or silk-plated hosiery of American make. One leading firm in Chemnitz engaged in the manufacture of full-fashioned hosiery has for two years imported considerable amounts of American seamless silk hosiery and disposed of the wares at remunerative prices. At the beginning of 1913, when seeking to place a large order with the American mill which had hitherto furnished the supply, information was received that its entire output for 1913 was already sold in advance. This firm has hitherto dealt chiefly in seamless socks which sell regularly in American stores for 25 and 50 cents per pair. The cheaper grade is made of artificial silk and retails in Germany at 1.50 marks (35.7 cents) per pair. The more expensive quality is of pure silk and is sold here at retail for 2 marks (47.6 cents) per pair.

Another manufacturer in Chemnitz, who makes seamless hosiery exclusively and is in close business relations with an extensive circle of German department stores and retailers, informs the Chemnitz consulate that the demand for American seamless hosiery is so marked among his customers that he is exceedingly desirous of securing the output of one or more American mills. The machines in his mills and in the establishments of other similar Chemnitz hosiery firms are equipped for the knitting of coarser grades of yarn. In American mills the mechanical equipment for the production of hosiery knit from the finer numbers has been vastly augmented of recent years. As the German demand for these finer grades of work has suddenly developed and assumed relatively large dimensions, the domestic manufacturers are totally unable to manufacture the class of wares now wanted. There is, of course, a certain hesitation to make large increases in plant for what may prove to be a merely temporary fashion.

Attempts have been made to introduce American seamless cotton hosiery, but thus far without success. The German makers seem able to meet the competition easily.

The bulk of the imports of American seamless silk hosiery goes to jobbing houses in Berlin or Hamburg and is distributed from those points to the retail trade. Importations through Chemnitz firms are, thus far, of much less importance. The Chemnitz manufacturers are, however, realizing the desirability of carrying the American wares in stock in order to meet the demands of customers and utilize existing relations with them.

At present much of the volume of the imports of American seamless silk hosiery into Germany is due to the quick recognition by German dealers and manufacturers that there is an excellent opportunity for making good profits in handling the article, and the remainder is the result of a very well-organized campaign by a single American firm.

The cost of raw materials is the same in both countries, and the factor of wages enters relatively less into the cost of seamless hose, so that differences in wage rates do not count for as much as in the case of full-fashioned wares.

#### LARGE SALES OF AMERICAN HOSIERY.

[Consul George Nicolas Ift, Nuremberg, Daily Consular and Trade Reports, Apr. 19, 1913.]

Dealers in Nuremberg say that the American makers of silk hosiery, gloves, underwear, etc., have obtained a large share of the German trade. It is said that the manufacturers of Chemnitz now have experts in the United States studying American methods of manufacture and buying new machines.

The quality and low price of the American silk hosiery now being offered in Germany have caused a considerable increase in the demand for this class of goods as compared with cotton and lisle. Ladies' silk stockings sell in Germany for \$0.60 to \$5 a pair,

the greatest demand being for a staple article selling between \$0.90 and \$1.50. Silk socks for men can be bought for \$0.60 to \$2.40 per pair, a favorite staple selling for \$0.72 to \$0.80 a pair.

At Frankfurt on the Main the demand for silk hosiery is not large. One dealer catering to the high-priced trade states that with few exceptions silk hosiery is worn only in the evening. French silk socks are there regarded as the best. The more expensive grades of English and French socks, selling for \$2 and up, are generally made with embroidered clocks. One leading dealer in Frankfurt carries American silk socks with lisle toes, heels, and tops, which sell at \$1.10 per pair, while an American shoe firm has met with fair demand for a line of silk socks with lisle parts selling for \$0.60, which it introduced. This store also sells American silk stockings with lisle parts for \$0.60 to \$1.65 a pair.

French and English hosiery is imported direct, while the American lines sold are obtained through importers. Local haberdashers generally have commission houses in London and Paris through which they purchase ties, hats, shirtings, underwear, novelties, etc. In Breslau the use of silk hosiery is increasing, but the demand is curtailed by the cold, wet weather.

#### INDIA.

##### AMERICAN SILK HOSIERY RECOGNIZED AS BEST.

[Daily Consular and Trade Reports, Apr. 19, 1913.]

The sale of silk hosiery in India is confined chiefly to the European residents and the high-caste natives, and shows only a slight tendency to increase, but the present market, according to reports from consuls in Bombay and Madras, is believed to be sufficient to warrant the introduction of American-made hose of standard quality. American hose are already on sale in the former city, and are recognized as having the best shape. In that city importations are made direct by retailers from exporters in Europe and the United States. Japanese hosiery is sold cheaper than American, English, or German, and some importers state that it is more durable than the other makes in the Indian climate, while others disagree. It has not the shape of the European and American product, however.

Men's silk hose of Japanese make sell in the retail shops for \$1.59 per pair, while English and American sell for \$2.10 and German socks with cotton tops for \$0.97 to \$1.62. So far as could be ascertained, no silk socks with cotton foot and top, such as are sold in the United States for about \$0.50 a pair, are on the Bombay market. Ladies' silk hose sell for \$1.95 to \$3.08 per pair. Japanese silk hose may be purchased in some places in the bazaar as low as \$1.62 per pair. In Madras, ladies' stockings of spun silk, English make, sell for \$0.81 to \$1.22 per pair, and those of pure silk for \$1.38 to \$1.78. The wholesale prices for these spun-silk stockings range from \$7.05 per dozen upward, and for pure silk from \$8.51 per dozen upward. German or English silk half hose sell for \$4.40 to \$8.51 per dozen at wholesale and from \$0.65 per pair upward at retail. Black, white, navy, and tan are the favorite colors for ladies' hose, and black, navy, and tan for men's.

#### ITALY.

##### INCREASING DEMAND FOR FINE HOSIERY.

[Daily Consular and Trade Reports, Apr. 19, 1913.]

Rapid industrial progress, increasing population, and the annually increasing number of visitors all appear to be enhancing the prosperity of Naples, and thus increasing the demand for fine hosiery, which has for many years been large. On account of the mild climate of that part of Italy, low shoes are worn throughout the year, which also increases the demand for these goods. Men's silk socks sell for \$1 to \$2 per pair and women's silk hose for \$1 to \$3, with the demand for the latter strongest in the grades selling for \$1.20 to \$2. It is believed that there would be a good sale for women's stocking having the toe, heel, and top made of good quality lisle thread and the middle section of good silk if they could be sold for not more than \$0.80 a pair. Black, white, and gray are the favorite colors.

In Genoa men's silk socks sell for \$0.87 to \$3.86 per pair, but good American-made silk hose can be obtained for \$0.58 to \$1.11. Silk stockings for ladies sell for \$0.95 to \$2.70 a pair, those of American make bringing \$1.01 to \$1.45. The local demand is not large, but has shown considerable growth of late and promises well. A large part of the silk hosiery sold is imported.



The silk hose on sale in Florence are generally from the Lombardy district of Italy, although there is a limited importation from France and Germany. One shoe store has put in a line of American silk hose in colors to match the various shades of fancy shoes.

#### PERU.

##### NO DOMESTIC HOSIERY FACTORIES.

[Daily Consular and Trade Reports, Apr. 19, 1913.]

There is only a small sale of silk hosiery in Peru, probably on account of the high prices asked. Silk hose sell for \$20.44 per dozen pairs and up. A good market might be built up for a cheaper variety, such as is sold for \$0.50 to \$1 in the United States; but there is a customs duty of \$9.73 per kilo (2.2 pounds) on silk hosiery. In the coast zone, where most of the population observing European customs dwells, the temperature varies but little throughout the year and changes in the weight of wearing apparel are unnecessary. There are no hosiery factories in Peru, and imports are usually made by wholesale dealers, although the retailers also import direct to a large extent. Importers of hosiery are customarily given from four to six months' credit from date of invoice, while in some instances shipments are made against drafts at six months sight.

#### SOUTH AFRICA.

##### SILK HOSIERY TRADE.

[Consul General George H. Murphy, Cape Town, Commerce Reports, Apr. 28, 1915.]

Although the white population of South Africa numbers only about 1,300,000, the per capita purchasing power is considerably higher than in most countries. There is a limited, but growing, demand for silk hosiery at moderate prices.

The imports of silk hosiery (underwear) via the port of Cape Town, as shown by official returns for 1912, were valued at \$9,528; for 1913, at \$16,166. Trade statistics do not indicate the countries of origin for the separate ports. The returns for the whole of the Union of South Africa, however, show the countries of origin in these two years to have been:

Imported from—	1912	1913	Imported from—	1912	1913
United States.....	\$910	\$2,175	United Kingdom.....	\$9,177	\$10,332
France.....	788	1,007	All other countries.....	511	750
Germany.....	3,874	3,991			
Japan.....	2,643	4,696	Total.....	19,066	23,700
Switzerland.....	1,363	749			

In 1914 silk hosiery imports into the Union of South Africa were valued at \$36,878, but the shares of the various countries participating in this trade are not given in available returns.

The usual method of doing business is for the importer to have a branch office or buying agency in London or New York, through which all orders are executed. These over-sea representatives advance the cash to the manufacturer against shipping documents, making drafts upon the importer, with said documents attached. These drafts are drawn payable at sight, 30, 60, 90, or 120 days, as may have been previously arranged. A large proportion of the drafts are drawn at 90 days' sight. Should the importer desire to do business direct with the manufacturer, he will expect to give satisfactory bank references. In addition, R. G. Dun & Co. have branch offices in the principal trade centers of South Africa and are in position to supply the usual mercantile reports upon request lodged with any of their offices in the United States.

The two methods of distribution in general use in this country are, first, the appointment of some prominent importing firm as sole agents, the word "agent" in this case really meaning "importer"; and, second, the appointment of a manufacturer's agent, who will have the exclusive right to solicit business and who will receive a commission on all orders coming from his territory, whether direct or indirect. The word "agent" as used in the second sense means only that he is the authorized distributor of the manufacturer, hence his ability to induce sales rather than his financial strength is the measure of his value to his principal. It should be borne in mind that he never imports on his own account, and that all orders secured by him are filled either through the over-sea buyers of the importer or after definite arrangements for terms have been made between the manufacturer and the importer.

It is the opinion of experienced men that a specialty such as silk hosiery can best be handled through manufacturers' agents, as otherwise the sales would be limited to the one importer who might secure the agency. This is applicable to all articles of luxury, since the wholesale houses are engaged principally in supplying the country stores and would not for some years to come risk stocking silk hosiery.

#### SWEDEN.

##### SALE OF AMERICAN SILK HOSIERY INCREASING.

[Consul Douglas Jenkins, Goteborg, Daily Consular and Trade Reports, Apr. 19, 1913.]

The use of silk stockings and socks is apparently increasing in Sweden, but that the dealers there do not seem to know anything of American silk goods and generally express surprise when told of the extent of the silk-manufacturing industry in the United States. The Swedish demand is supplied entirely from abroad, chiefly from England, Germany, and France, as there is no domestic manufacture of these goods. Retail dealers say that they generally buy their stocks of silk hosiery from traveling salesmen or agents, although there are several wholesale importers in Goteborg who handle hosiery of other varieties.

In the cheaper grade of silk hose women's stockings sell for \$1.07 to \$1.45 per pair and men's socks for \$0.54 to \$0.81 per pair. Better grades of women's stockings bring \$1.85 to \$3.22 a pair, and of men's socks about \$1.70. The demand for men's silk socks is not so great as that for women's hose.

#### TASMANIA.

##### CONDITIONS PROPITIOUS FOR AMERICAN TRADE.

[Consul W. A. Bickers, Hobart, Commerce Reports, May 4, 1915.]

Tasmania is dependent upon foreign countries for a large proportion of its hosiery. Appreciable quantities of all kinds of hosiery, usually manufactured in the United States, are imported, but in the past American exporters have taken little interest in this trade—as is evident from the fact that out of a total importation into all Australia in 1913 of cotton hosiery of the value of \$1,150,000 the United States supplied only \$4,500 worth. Tasmania imported \$16,000 worth (from all countries) direct, while it is estimated that the jobbers of Melbourne and Sydney sold an additional \$35,000 worth to local hosiery dealers. Germany supplied over 80 per cent of the cotton hosiery imported into all Australia.

While conditions are propitious now for the introduction of American cotton hosiery, American manufacturers will not find the field so favorable in silk and woolen hosiery, as here the United Kingdom has a preferential tariff of 25 per cent against a general tariff of 30 per cent ad valorem. That this difference of 5 per cent has proved sufficient heretofore to give the United Kingdom a practical monopoly of this market is shown by the fact that that country supplied about 90 per cent of a total importation into Australia of such hosiery of the value of \$2,775,000 in 1913, while the United States furnished less than \$60,000 worth. The direct importation of silk and woolen hosiery into Tasmania amounted to \$68,000, and large quantities were obtained from the commercial centers of Australia.

There has been no indication so far that importers can not obtain their usual supply of silk and woolen hosiery from the United Kingdom. Until such is the case, American manufacturers are at a decided disadvantage in this market, and it would seem to be the best policy for them to make special efforts to extend their trade in cotton hosiery. Manufacturing conditions in the United Kingdom should indicate to them the most propitious time to endeavor to enlarge their sales of silk and woolen goods.

#### TURKEY.

##### PROBABLE OPENING FOR CHEAP SILK HOSIERY.

[Daily Consular and Trade Reports, Apr. 19, 1913.]

The silk hosiery sold in Beirut, Syria, is practically all of French manufacture, and is of rather inferior quality, although the prices charged by the retailers range between \$1.54 and \$3.86 per pair. The greatest demand is for cotton hosiery, which is supplied by Germany, Austria, Japan, and Spain in the order named. The Syrian is generally well shod, and in dry weather prefers slippers or oxfords to high shoes with his native

costume. The socks most generally worn are of brilliant colors and fancy patterns. Silk is greatly appreciated and is frequently worn with native dress, but is usually beyond the reach of the average smartly dressed native. If good American silk hose could be sold at retail for not more than \$0.50 or \$0.75 per pair, they would probably meet with a ready sale, both in men's and women's styles. There is also some demand for the better qualities, such as retail at \$1 and \$1.50 a pair. In the beginning it would be well to secure an energetic agent to introduce such goods to the merchants throughout Syria and to ship small quantities by parcel post to minimize shipping costs.

#### UNITED KINGDOM.

##### FAVORABLE OPPORTUNITY FOR SALE OF AMERICAN GOODS.

[Commercial Attaché A. H. Baldwin, London, Feb. 8, 1915, Commerce Reports, Mar. 15, 1915.]

Retail prices on the stockings sold in English shops are not held, as in America, at 15, 25, 35, or 50 cents, but include practically all intervening figures, although the usual interval in the larger shops is 6 cents (3 pence). Some of the smaller shops, in pricing on special sales, make use even of the farthing (half cent), as well as the halfpenny (1 cent).

There is no prejudice against American products on the part of the English buying public, and, in the opinion of one of the leading merchants of London, there will be an exceptionally favorable opportunity at the close of the war for the introduction of many classes of manufactured articles from the United States. There are numerous products in which competition is practicable and where American styles and qualities are much favored by European buyers.

Attention is invited to the fact that a more ready disposition on the part of American manufacturers to comply with the special requirements of this market is necessary. It is very difficult to disturb the accustomed habits of the people here, and it is far simpler to make the necessary modifications in production than to attempt to force unusual styles. For example, in men's underwear the preference is for two-piece suits, and while buyers might admit that the union suit has many advantages, the national habit persists in clinging to the former styles.

Further, it should be noted that there are many factors that would not perhaps occur to American manufacturers—such as the character of the climate in Great Britain, which forces people to dress more warmly than in the States. American homes are maintained habitually at temperatures higher than is usual here, and the result is that in the United States one can with comfort wear lighter underwear than in England, where the difference in temperature between outdoors and within is materially less.

English tailors in making men's clothing cut trousers very much higher in the waist, and especially in the back. The result is that underwear is also cut to conform to this style. Makers of drawers in America should take this fact into consideration.

In the matter of hosiery, the suggestion is made that American manufacturers are loath to comply with requirements that are essential for this market. Women's stockings, as knit here, increase in length with the size of the hose, and buyers insist on the longer length of the leg of the stocking as the length of the foot increases. It is understood that American makers standardize their product to a much greater extent than is the custom in Great Britain, and are slow to acquiesce in making such modifications in their machines as are required with respect to these minor details. The insistence on a purchase of a minimum quantity—for example, 30 dozens of single style—is another obstacle. German manufacturers have heretofore been quite prepared to supply different styles on orders for as few as 3 dozens of a given kind. In any large shop, which may carry 300 to 400 styles, it is obviously out of the question to consider the purchase of 30 dozens of each.

The sizes of men's socks usually sold are 10, 10½, and 11, and only in the largest stores will be found sizes of 9½ or 11½. It should further be remembered that London is ordinarily a great tourist center, not only for travelers from America, but also from Germany, Austria, France, Italy, and other countries, and there is a considerable sale for men's hose of silk and cotton among this clientele. This trade is for the moment interrupted, but it undoubtedly will be resumed at the close of the war. For the strictly English trade, woolen cashmere practically crowds out all other styles of hosiery; and it was stated to the writer that in a shop employing over 1,000 men it would probably be difficult to find a single employee who wore other than woolen hose.

American cotton-fleeced underwear is believed to be the best article for the price that is on the market here, and undoubtedly a great sale could be developed.

It should be emphasized again that it is difficult, if not quite impracticable, to modify very much the current taste in such purchases here; and greater trade will be secured by following the lines of least resistance and providing the styles and qualities to which the market is committed by long custom and tradition. A number of samples are sent, indicating in part the range of principal qualities and styles of hosiery and underwear in favor with the great middle class in England. [These samples may be inspected at the Bureau of Foreign and Domestic Commerce or its branch offices.] For men's socks, the popular prices are 18 pence and 2 shillings (36 and 48 cents), and a tremendous trade is done in styles at these prices.

##### STEADILY INCREASING SALE OF AMERICAN SILK HOSIERY.

[Daily Consular and Trade Reports, Apr. 19, 1913.]

Reports from all parts of England and Scotland indicate that the demand for silk hosiery, and especially for hose with lisle or cotton top and sole and silk boot, is increasing steadily. In Leeds the demand exceeded the supply during 1912. American manufacturers are said to have first introduced the silk stocking with cotton parts, but in some sections the Germans have almost obtained control of the market on account of their ability to fill orders promptly and to meet the continuous demand without delay, which the American manufacturers would not guarantee. Some brands of American silk and part-silk hose, especially in the medium-price grades, have a wide distribution, however. Standard grades of men's silk hose from the United States sell for 61 cents a pair. The importing is generally done by distributing firms or agents in the large cities, although some dealers buy direct.

The following list of prices in one of the leading department stores of London, obtained by Consul General Griffiths, will give an idea of the prices prevailing: Men's socks—black silk, embroidered clocks, \$2.37 to \$2.67; black spun silk, \$0.95 to \$1.33; black and colors, self-clocks, \$1.20; black silk, shot with colors, \$1.76 to \$1.88. Men's stockings—black silk, \$3.46 to \$3.86; black spun silk, \$2.19 to \$2.49. Women's stockings—black spun silk, \$0.48 to \$1.40; tan spun silk, \$0.71 to \$0.89; black pure silk, \$1.84 to \$3.91; white pure silk, \$2.06 to \$2.31; tan pure silk, \$1.84 to \$1.94.

In Scotland the cold climate has been regarded as an obstacle to the sale of silk hosiery for street wear, but this trade shows a tendency to increase considerably. The sale of this class of hosiery in Belfast, though small, is also on the increase. In men's hose the demand is practically confined to black socks for evening wear, as heavy weights are ordinarily worn for day dress on account of the excessive moisture and coolness of the climate.

#### VENEZUELA.

##### IMPORTS FROM DIFFERENT COUNTRIES.

[Consul Ralph J. Totten, Maracaibo, Daily Consular and Trade Reports, Sept. 2, 1911.]

Cotton knit goods, consisting mostly of undershirts and hosiery, make a very important item in the imports into the Maracaibo district. The imports of the two articles for the calendar year 1910 were as follows:

Articles.	Germany.	England.	Spain.	United States.	Total.
Hosiery.....	\$2,479	.....	\$1,883	.....	\$4,362
Undershirts.....	14,916	\$5,349	20,258	\$447	40,970
Total.....	17,395	5,349	22,141	447	45,332

In women's stockings the demand is for solid white, pink, and light blue in the cheap grades and for blacks and fancies in the better grades. For children, blacks, whites, and pinks are the most popular. Stockings cost abroad from \$0.75 to \$6 per dozen and retail here at 25 cents to \$1 per pair. Men's half hose cost \$1.50 to \$6 per dozen abroad and retail here at 35 cents to \$1 per pair. White or unbleached balbriggans are most used, although there is some sale for fancies and drop-stitch half hose in the better grades.

Only one style of undershirt is used in this section, although they are imported in several grades. The popular garment is of medium or light weight knit cotton with full-length sleeves and no opening front or back. They slip on over the head like a

long-sleeved, low-necked gymnasium shirt. The favorite colors are light blue, pink, fancy stripes, and solid black. The cheaper grades have sewed seams and hemmed cuffs. The medium grades have knitted cuffs sewed on. The best grades are full fashioned with knitted seams and knitted cuffs. The cheap grade costs abroad about \$1.50 per dozen. With freight and duties added they cost the jobber about \$2.12 laid down in Maracaibo. They are jobbed at \$2.50 per dozen and retailed at 25 cents each. The best average grade costs about \$5 per dozen or \$6.50 laid down here. This grade is jobbed at \$7.72 per dozen and retails for 80 cents each.

Merchandise of this nature should never be packed in cartons or any sort of boxes. Undershirts are generally wrapped in thin paper, one dozen to the package. The sizes are from 30 to 38 inches, chest measure. About 50 dozen shirts are wrapped in paper and then baled in cloth for shipping. This method of packing saves the buyer a considerable sum in duties, as all Venezuelan customs charges are figured on gross weight, including containers and packing material. The customs duties on cotton knit goods entering Venezuelan customhouses are 2.50 bolivars per kilo (48 cents per 2.2 pounds) plus 56.5 per cent surtax on the amount of the duty.

#### IMPORTS INTO OUTLYING TERRITORIES AND FOREIGN AMERICAN COUNTRIES.

The value of the imports of hosiery into foreign countries of the Western Hemisphere, and into Porto Rico, Hawaii, and the Philippine Islands are shown below. The statistics are as complete as can be obtained from the official reports of the various countries. The classification in each case is that of the country for which the data are given. In the case of many countries, the imports of hosiery are not separately imported, but are included under the heading of "Clothing" or "Wearing apparel," and in such cases the data are not here shown.

Statistics of the imports of the various kinds of wearing apparel, so far as they are specified in the official reports of the countries mentioned below and of other countries in the Western Hemisphere, appear in a report on the Cost of Production of Women's Muslin Underwear, previously issued by the Bureau of Foreign and Domestic Commerce.

##### Argentina (year ended Dec. 31, 1913):

Hosiery—	
Cotton.....	\$1,903,055
Wool.....	91,345
Silk.....	118,020
Other fibers.....	521,611

##### Brazil (year ended Dec. 31, 1912): Hosiery, cotton.....

416,145

##### Canada (year ended Mar. 31, 1914):

Socks and stockings—	
Cotton.....	1,084,801
Wool.....	1,828,688
Silk.....	301,836

##### Chile (year ended Dec. 31, 1913):

Hosiery, drawers, undershirts, etc., knitted, cotton.....	825,684
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Hosiery—	
Wool.....	72,623
Silk.....	18,805
Flax.....	2,396

##### Costa Rica (year ended Dec. 31, 1912): Stockings.....

61,416

##### Ecuador (year ended Dec. 31, 1911):

Hosiery—	
Cotton.....	103,097
Wool.....	1,027
Silk.....	215
Linen.....	2,249

##### Hawaii (year ended June 30, 1913): Hosiery, cotton, from foreign countries.....

1,383

##### Mexico (year ended June 30, 1912):

Hosiery—	
Cotton.....	\$310,544
Linen.....	588
Artificial silk.....	267

##### Hosiery and knitted goods, not specially mentioned.....

140,098

##### Peru (year ended Dec. 31, 1913): Hosiery, cotton.....

139,698

##### Philippine Islands (year ended June 30, 1912):

Hosiery, cotton—	
From the United States.....	37,410
From other countries.....	81,607

##### Porto Rico (year ended June 30, 1914): Hosiery, etc., cotton, from foreign countries.....

9,100

##### Trinidad and Tobago (year ended Dec. 31, 1912): Hosiery.....

24,639

##### Uruguay (year ended Dec. 31, 1911):

Hosiery—	
Cotton.....	373,116
Wool.....	21,621
Silk.....	2,351
Linen.....	3,189

##### Venezuela (year ended Dec. 31, 1913):

Undershirts and hosiery—	
Cotton.....	232,497
Wool.....	1,365



## CHAPTER VIII.

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